A faint, light-colored watermark of a classical building with four columns and a triangular pediment is visible in the background.

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CITY OF NEW YORK

New York Zoological Society



1895-1936

FORTY-FIRST ANNUAL REPORT

JANUARY, 1937



FORTY-FIRST ANNUAL REPORT
OF THE
New York Zoological Society



YOUNG MASAI GIRAFFE

Gift of the Junior Auxiliary, New York Zoological Society

1895

1936

CITY OF NEW YORK

New York Zoological Society

Founded in 1895 for the establishment of the Zoological Park; conservation of the animal life of the world--fishes, mammals, birds; promotion of zoology through exploration and publication; and, in 1900, the direction of the New York Aquarium in Battery Park



FORTY-FIRST ANNUAL REPORT

Address, *Director*, W. Reid Blair, Zoological Park, 185th Street and Southern Boulevard; *Director*, Charles H. Townsend, Aquarium, Battery Park; *Secretary*, Fairfield Osborn, 101 Park Avenue.

Published at the Office of the Society,
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JANUARY, 1937

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THE NEW YORK ZOOLOGICAL SOCIETY

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ILLUSTRATIONS

YOUNG MASAI GIRAFFE	<i>Frontispiece</i>
BLACK JAGUAR	Facing Page 1

The Zoological Park

OWL MONKEY	RHINOCEROS VIPER
PRONG-HORNED ANTELOPE	GIANT RIVER TURTLE
LESSER PANDA	BLUE-TONGUED LIZARD
CAPE HEDGEHOG	TROPICAL TREE FROG
OTTER	SOUTH AFRICAN WOOD OWL
MEERKAT	HAMMERHEAD
GREATER KUDU	BLACK DUCKS
SIBERIAN LYNX	CRESTED SERIEMA
LECHWE WATERBUCK	GREATER MAGPIE TANAGER
TAYRA	SECRETARY BIRD
CHAPMAN ZEBRA	WHITE-WINGED CHOUGH
DYBOWSKI DEER	GALEATED CURASSOW

The New York Aquarium

CAVE FISH	YOUNG TARPOON
GROUPERS AND KILLIES	SEA PIGEON
FOUR-EYED FISH	ARCHER FISH
SEA ANEMONES	MUD SUNFISH

Department of Tropical Research

ISLAND OF TOBAGO	KAIETEUR FALLS
BROWN PELICAN	RAINBOW TANAGER
GRAY FRIARS	MASKED BOOBY

New York Zoological Society

Membership

Membership.—Membership in the Zoological Society is open to all who are interested in the objects of the organization and desire to contribute toward its support.

Classes.—Annual Membership is \$10. This entitles the holder to all periodical publications of the Society, privileges of the Administration Building, lectures, special exhibitions, and twenty-five tickets to the Zoological Park for Member's admission or distribution on pay days, when the collections may be seen to the best advantage.

Annual Members may become Life Members by the payment of \$200; a subscriber of \$1,000 becomes a Patron; \$2,500, an Associate Founder; \$5,000, Founder; \$10,000, a Founder in Perpetuity, and \$25,000 a Benefactor.

Applications for Membership should be sent to the Secretary, New York Zoological Society, 101 Park Avenue, New York, N. Y.

Form of Bequest

I do hereby give and bequeath to the "NEW YORK ZOOLOGICAL SOCIETY," of the City of New York.....

Address, CORNELIUS R. AGNEW, Treasurer
101 Park Avenue, New York, N. Y.

New York Zoological Society

Organized 1895

Presidents

I.	ANDREW H. GREEN.....	1895 to 1897
II.	LEVI P. MORTON.....	1897 to 1909
III.	HENRY FAIRFIELD OSBORN.....	1909 to 1925
IV.	MADISON GRANT	1925

First Vice-Presidents

I.	J. HAMPTON ROBB	1895 to 1897
II.	HENRY FAIRFIELD OSBORN	1897 to 1909
III.	SAMUEL THORNE	1909 to 1916
IV.	MADISON GRANT	1916 to 1925
V.	FRANK K. STURGIS	1925 to 1932
VI.	W. REDMOND CROSS	1932

Second Vice-Presidents

I.	CHARLES E. WHITEHEAD	1895 to 1902
II.	JOHN L. CADWALADER	1902 to 1915
III.	MADISON GRANT	1915 to 1916
IV.	FRANK K. STURGIS	1916 to 1925
V.	HENRY D. WHITON	1925 to 1930
VI.	KERMIT ROOSEVELT	1930

Treasurers

I.	L. V. F. RANDOLPH	1895 to 1901
II.	CHARLES T. BARNEY	1901 to 1903
III.	PERCY RIVINGTON PYNE	1903 to 1922
IV.	CORNELIUS R. AGNEW	1922

Secretaries

I.	MADISON GRANT	1895 to 1925
II.	WILLIAM WHITE NILES	1925 to 1935
III.	FAIRFIELD OSBORN	1935

Chairmen, Executive Committee

I.	CHARLES E. WHITEHEAD	1895 to 1896
II.	HENRY FAIRFIELD OSBORN	1896 to 1903
III.	CHARLES T. BARNEY	1903 to 1907
IV.	HENRY FAIRFIELD OSBORN	1907 to 1909
V.	MADISON GRANT	1909

Directors

I.	WILLIAM T. HORNADAY, <i>Zoological Park</i>	1896 to 1926
II.	CHARLES H. TOWNSEND, <i>New York Aquarium</i>	1902
III.	W. REID BLAIR, <i>Zoological Park</i>	1926

Board of Trustees

City of New York { HON. FIORELLO H. LAGUARDIA, *The Mayor*
Ex-officio { HON. ROBERT MOSES, *Commissioner of Parks*

Class of 1938

ROBERT S. BREWSTER	J. WATSON WEBB
EDWARD S. HARKNESS	DE FOREST GRANT
IRVING K. TAYLOR	GEORGE F. BAKER
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Class of 1939

MADISON GRANT	OGDEN L. MILLS
*LEWIS RUTHERFURD MORRIS	VINCENT ASTOR
ARCHER M. HUNTINGTON	C. SUYDAM CUTTING
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HARRISON WILLIAMS	ALFRED ELY
MARSHALL FIELD	HERBERT L. PRATT

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FREDERIC C. WALCOTT	ROBERT GORDON MCKAY
GEORGE C. CLARK	KERMIT ROOSEVELT
W. REDMOND CROSS	JOHN M. SCHIFF
FAIRFIELD OSBORN	LAURANCE S. ROCKEFELLER
GEORGE GORDON BATTLE	F. TRUBEE DAVISON

* Deceased.

Officers of the Society

General Offices, 101 Park Avenue, New York, N. Y.

President: MADISON GRANT

First Vice-President:

W. REDMOND CROSS

Second Vice-President:

KERMIT ROOSEVELT

Secretary: FAIRFIELD OSBORN, 101 Park Avenue

Treasurer: CORNELIUS R. AGNEW, 101 Park Avenue, N. Y.
Assistant Treasurer: THE CITY BANK FARMERS TRUST COMPANY

Executive Committee

MADISON GRANT, *Chairman*

W. REDMOND CROSS

GEORGE C. CLARK

KERMIT ROOSEVELT

DE FOREST GRANT

FAIRFIELD OSBORN

BAYARD DOMINICK

CORNELIUS R. AGNEW

C. SUYDAM CUTTING

J. WATSON WEBB

LAURANCE S. ROCKEFELLER

General Officers

W. REID BLAIR, *Director, Zoological Park*

WILLIAM T. HORNADAY, *Director Emeritus*

CHARLES H. TOWNSEND, *Director, New York Aquarium*

H. C. RAVEN, *Prosecutor*

R. L. CERERO, *Bursar*

HERMANN W. MERKEL, *Consulting Landscape Architect*

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W. REDMOND CROSS, *Chairman*

CORNELIUS R. AGNEW, *Treasurer*

LEE S. CRANDALL, *Secretary*

W. REID BLAIR

CHARLES H. TOWNSEND

H. R. MITCHELL

GEORGE C. CLARK

ALFRED ELY

WARREN KINNEY

Committees of the Society

Finance Committee

GEORGE C. CLARK, *Chairman*

LANDON K. THORNE

DE FOREST GRANT

W. REDMOND CROSS

FAIRFIELD OSBORN

CORNELIUS R. AGNEW, *Ex-officio*

Auditing Committee

GEORGE C. CLARK, *Chairman*

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Editorial Committee

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CHARLES H. TOWNSEND

WILLIAM BEEBE

GEORGE BIRD GRINNELL

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Nominating Committee for Officers and Committees

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CHILDS FRICK

WILLIAM DE FOREST MANICE

Nominating Committee for Board of Trustees

ALEXANDER LAMBERT, *Chairman*

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JAMES R. SHEFFIELD

Publicity Committee

W. REID BLAIR, *Chairman*

CHARLES H. TOWNSEND

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WILLIAM BEEBE

DE FOREST GRANT

RAYMOND L. DITMARS

WILLIAM BRIDGES

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ALFRED ELY, *Chairman*

CHARLES STEWART DAVISON

KERMIT ROOSEVELT

LAURANCE S. ROCKEFELLER

Committee on Wild Life Conservation

W. REDMOND CROSS, *Chairman*

J. WATSON WEBB

ALFRED ELY

Executive Staff

Officers of the Zoological Park

W. REID BLAIR, *Director and General Curator*

H. R. MITCHELL, *Manager*

R. L. DITMARS, *Curator of Mammals and Reptiles*

LEE S. CRANDALL, *Curator of Birds*

WILLIAM BEEBE, *Honorary Curator of Birds*

*CHARLES V. NOBACK, *Veterinarian*

WILLIAM MITCHELL, *Cashier*

CHARLES J. RENNER, *Civil Engineer and Constructor*

CLAUDE W. LEISTER, *Ass't to Director and Curator, Educational Activities*

MARTIN S. GARRETSON, *Curator, Heads and Horns Museum*

WILLIAM BRIDGES, *Editor and Curator of Publications*

Officers of the Aquarium

CHARLES H. TOWNSEND, *Director*

CHARLES M. BREDER, JR., *Assistant Director*

MARVIN C. FENSTEMAKER, *Secretary*

WILLIAM C. BENNETT, *Chief Engineer*

Officers of the Department of Tropical Research

WILLIAM BEEBE, *Director*

JOHN TEE-VAN, *General Associate*

WILLIAM K. GREGORY, *Scientific Associate*

GLORIA ELAINE HOLLISTER, *Research Associate*

JOCELYN CRANE, *Technical Associate*

* Deceased.



Black Jaguar (*Felis onca*). The jaguar, with many races or subspecies, has a broad habitat from the valley of the Rio Grande to the lower portion of South America. In the rain forests of the tropics, black specimens are not uncommon. This is a parallel condition to that of the Asiatic Leopard.

REPORT OF
THE EXECUTIVE COMMITTEE
MADISON GRANT, Chairman

THE Executive Committee submits the following report to the Board of Trustees for the year 1936:

It will be noted, as indicated throughout this report, that the affairs of the Society during the past year have continued in satisfactory condition. On the other hand, it is becoming more and more apparent to your Committee that the time is now ripe for a forward movement in various important services which the Society is rendering to the public. At both the Zoological Park and the Aquarium numerous plans have been formulated which, when carried out, will materially increase the educational and scientific values of these institutions. Firstly, these plans involve the construction of new buildings, or readjustment of existing buildings, which will not only provide the public with far better means of studying our exhibits but will also result in better conditions for our many animal, bird, reptile and fish collections. Secondly, there is great need for the extension of the education of the public in Wild Life Conservation.

All of these projects require additional funds and endowment, having in mind that the existing financial resources of the Society are only adequate to maintain it in *statu quo*. In the above connection, attention is drawn to the fact that any and all contributions made to the Society are deductible for income tax purposes. The same is true of bequests. All Americans who are interested in conservation should consider a bequest to the Society to help it in its work of preserving America in its untouched condition. The little that is left of wild life and forests, for example the great redwood trees of California and remnants of primeval forests elsewhere, should be preserved as a sacred inheritance, and the way to assist in doing this is to provide the Zoological Society with substantial funds for these purposes.

The public, not only of the metropolitan area but of the country at large, continues its great interest in the exhibits at the Zoological Park and at the Aquarium—the number of visitors at the latter institution being

the greatest in the last twenty-five years. The aggregate number of visitors at both institutions reached a figure of 5,346,793.

The Society again last year operated without any deficit and the financial condition continues to be sound as a result of good management of its invested funds combined with careful administration of the Zoological Park, the Aquarium and in connection with other miscellaneous expenses.

The following contributions were received during the year for the Endowment Fund:

Estate of Edwin Thorne	\$5,000.00
Edith H. de Long	1,000.00

In our last report reference was made to the necessity of a readjustment of our Pension Fund, operating for the benefit of all employees. The reorganization of this fund, and of the plan under which it operates, was surrounded by numerous difficulties but these were overcome and the new plan, which your Committee feels is now on a permanent and sound basis, became effective as of January 1, 1937. However, attention is called to the fact that the interests of the employees, whose salaries during the years of employment are very moderate, can be materially improved should the much needed additional capital funds become available for this purpose.

In connection with the Zoological Park, application has been made to the City for funds in excess of \$100,000.00 to be used in repairs of buildings, which are urgently needed. It is hoped that the application for these funds will be granted so that this work can be carried out during 1937.

Your attention is called to the report of the Director of the Park on Page 11, and the report of the Director of the Aquarium on Page 41, which provide full information as to acquisitions, administration and attendance.

The Department of Tropical Research, under Dr. William Beebe, completed two important expeditions during the year. The work of this Department in deep-sea exploration in waters surrounding the Bermuda Islands was continued up to the close of last year. Due to the generosity of Dr. Henry Lloyd of Boston, in offering the use of his yacht, *Hardi Baiou*, Dr. Beebe and his staff were engaged in marine exploration in the West Indies. An additional generous offer was made by Mr. Templeton Crocker of San Francisco of his yacht, *Zaca*, for marine exploration off

the coast of southern California. This work was carried out during the past summer and a detailed report as to the results of these voyages will be found on Page 53. There will also be found a detailed report of Miss Gloria Hollister's expedition to British Guiana.

Members of the Society can perform a real service by proposing their friends for membership. It is felt that many people would be desirous of becoming members were their attention called to it. If each present member would assume the responsibility for the enrollment of one new member during the year 1937, the problem of enlarging our membership would be easily solved. Your Committee hopes that members who read this report will make this valuable contribution to the Society's progress.

Continued support is being given all desirable conservation activities. Many large American game animals are threatened with extinction in their wild state and it is the duty of the Society, as far as possible, to preserve the same animals in the national parks. In this connection the proposed national park in the southern tip of Florida is cordially endorsed by your Committee, and if it becomes a law, will do much to preserve some valuable forms of wild life, notably the Manatee.

Public opinion on this matter has greatly improved in recent years, but the fact remains that much can still be done in the protection of the natural fauna of this continent, and elsewhere in the world, which, if lost, can never be replaced.

For some time past the Society's Committee on Heads and Horns, composed of Messrs. Alfred Ely, Chairman; Charles Stewart Davison, Kermit Roosevelt and Laurance Rockefeller, has been making an exhaustive study of the National Collection of Heads and Horns. The Committee's Special Report, of December 29, 1936, is an admirable summary of the collection as it now stands, and recommends a course to be pursued in completing the collection.

Briefly, the Special Report classifies and enumerates 733 species of big game suitable for such a collection; lists them in order of importance, recommends energetic efforts to complete the group of first importance and the acquisition of specimens in the other divisions as opportunity arises; makes suggestions for proper mounting of certain of the present specimens in the collection; urges a study of means of preserving heads and horns and the application of the latest methods to the present collection; recommends concrete planning for the future when additional building will be necessary to exhibit the completed Geographic and Zoological

groups, and makes other pertinent recommendations. The present collection comprises 739 specimens and there is scarcely any space left to hang further heads.

It is hoped that most of the matter in the Special Report may be prepared for separate publication at a later date.

The Society and the Board of Trustees suffered a great loss during the past year by reason of the death of Dr. Lewis Rutherford Morris, who had been a member of the Board since 1911, and who had always taken an active interest in the Society's affairs.

The following gentlemen were elected to fill vacancies on the Board of Trustees:

F. Trubee Davison	Class of 1940
William DeForest Manice	Class of 1938

The Spring Meeting of the Board of Trustees was held in the Administration Building in the Zoological Park on Thursday, May 14, 1936. The Meeting was preceded by a luncheon and followed by the Annual Garden Party.

The twenty-eighth Annual Dinner to the Board of Trustees was held, through the courtesy of Mr. Fairfield Osborn, at the University Club on Wednesday, December 30, 1936. Immediately after the dinner the Annual Meeting of the Board of Trustees was held.

MEMORANDUM OF MEETINGS

1937—1938

Annual Meeting of the Society—January 11, 1938
Hotel Waldorf-Astoria

Meetings of Board of Trustees
Spring Meeting—Park (*Preceded by Luncheon*), May 13, 1937
Annual Meeting December 28, 1937

Executive Committee Meetings 2nd Thursday Monthly

January 14, 1937	April 8, 1937	October 14, 1937
February 11, 1937	May 13, 1937	November 11, 1937
March 11, 1937	June 10, 1937	December 9, 1937

Members' Day and Ladies' Day at the Zoological Park:
May 13, 1937, 3:00 P. M.

The Auditors, Messrs. Peat, Marwick, Mitchell & Co., have audited the accounts of the Society and found same correct. The Auditor's Report, as well as that of the Auditing Committee, follows the Report of the Treasurer.

Your Committee takes this occasion to express its appreciation to the Administrative Staffs and employees at both the Zoological Park and the Aquarium for their capable and loyal work during the past year.

MADISON GRANT, *Chairman*

W. REDMOND CROSS

KERMIT ROOSEVELT

FAIRFIELD OSBORN

CORNELIUS R. AGNEW

GEORGE C. CLARK

J. WATSON WEBB

DEFOREST GRANT

BAYARD DOMINICK

C. SUYDAM CUTTING

LAURANCE ROCKEFELLER

In Memoriam

Lewis Rutherford Morris

The following resolution was entered in the minutes of the meeting of the Executive Committee of the New York Zoological Society on December 10, 1936:

The death of Dr. Lewis Rutherford Morris on December 9th was reported with deep regret and the following action was taken after many expressions of sympathy:

WHEREAS, Dr. Lewis Rutherford Morris had served as a member of the Board of Trustees of the Society since 1911, and

WHEREAS, he had at all times shown great interest in the Society's affairs and had aided materially in promoting its welfare

Now therefore, be it resolved that the Executive Committee of the New York Zoological Society desires hereby to express its deep sorrow at the loss of their associate Dr. Lewis Rutherford Morris, and be it further

RESOLVED, that this expression of appreciation be sent to the family of Dr. Morris and also be spread upon the Minutes of the Meeting.

THE LADIES' AUXILIARY
Of the New York Zoological Society, 1936

CHILDREN'S OUTING FUND

FOR the annual day outings to the New York Zoological Park during the summer of 1936, 17 members of the Ladies' Auxiliary contributed the sum of \$260, and an anonymous contribution of \$87 made a total of \$347 received.

There is a never-ending interest in these day outings which have meant so much to the children of the greater city. Increased recreational facilities have meant better play times for hundreds of children but nothing can quite take the place of those long delightful days in the park with opportunity provided for play in the open country and the interesting adventure of studying the inhabitants of the "Zoo" at close range.

A keen interest is shown by the children in any small detail of change, such as new animals or changes in housing arrangement, which goes to show that a real impression is made.

During the past summer season, 2,100 children participated in the day outings.

Expenditures for carfares—1,100 single fares and 800 double fares—amounted to \$270. The balance, \$77, was expended for extra lunches.

Leadership is in every case voluntary, making it possible to utilize all contributions for transportation and an occasional "treat."

Following is a list of contributions to the Children's Outing Fund:

Mrs. George F. Baker.....	\$ 25.00
Mrs. Cleveland H. Dodge.....	10.00
Mrs. E. Marshall Field.....	50.00
Mrs. Reginald Fincke.....	5.00
Mrs. Robert Livingston Gerry.....	25.00
Mrs. Henry R. Hoyt.....	10.00
Mrs. E. M. Murray.....	5.00
Mrs. Fairfield Osborn.....	5.00
Mrs. Percy R. Pyne.....	10.00
Miss Pauline Robinson.....	20.00

Mrs. Henry M. Tilford.....	25.00
Mrs. William V. S. Thorne.....	10.00
Mrs. Frank S. Witherbee.....	15.00
Mrs. Alexander S. Webb.....	10.00
Mrs. Turnbull Wood.....	5.00
Mrs. George Whitney.....	25.00
Mrs. William Woodward.....	5.00
Anonymous	87.00
<hr/>	
Total.....	\$347.00

MISS PAULINE L. ROBINSON

Chairman, Children's Excursions, Ladies' Auxiliary

REPORT OF THE
DIRECTOR OF THE ZOOLOGICAL PARK
W. REID BLAIR

THERE is nothing static about a zoological collection. It is ever-changing, and there is always some new animal to interest even our regular visitors. During the year there was an increase in the number of both species and specimens over those of the previous year, while on the other hand there were few important losses in our collections.

The study of zoology from living specimens and the public thirst for knowledge and entertainment do not remain fixed. New conceptions of zoological park construction, some of them as far in advance of our facilities as our original construction plan was in advance of older practice, have come into being in recent years. Not to embrace the new simply because it is new, but to welcome tried and proved new practices that will contribute to the comfort and exhibition value of our collections, is well within the traditions of the Zoological Society.

New possibilities of making use of our great animal collections are opening up to us. New demands are being heard for the entertainment and instruction of a public that numbers nearly three million visitors a year.

In recent years no new construction has been undertaken, not because it was not needed, but because of financial conditions. To balance the Zoological Park's budget, to carry on the work without imposing an additional financial strain either upon the city or the Zoological Society during depressed times, has been the constant endeavor of the administrative staff of the Park. To that end even routine repairs and maintenance were sometimes confined to emergency work, but the point has now been reached when major repairs to roofs, cages and the like are necessary and can no longer be delayed.

For some years the course that the future development of the Zoological Park should take has been growing increasingly apparent, and it is hoped that the time will soon come to resume expansion and to develop a number of projects which have been under consideration for years and for which definite need exists.

ATTENDANCE

The Zoological Park attendance has always been so large as to establish the Park's unquestioned popularity not only with New Yorkers but with the thousands of nation-wide daily visitors to the city. The attendance by months for the past three years was as follows:

	1936	1935	1934
January	83,918	60,668	109,574
February	66,831	97,469	68,175
March	217,574	251,139	145,801
April	191,093	298,226	396,139
May	411,650	380,682	447,696
June	238,400	351,612	342,771
July	325,198	328,825	336,758
August	367,843	313,015	347,113
September	314,990	301,410	317,203
October	196,615	209,366	205,733
November	142,624	109,441	161,844
December	89,337	55,228	90,833
	—	—	—
	2,646,073	2,757,081	2,969,640

DEPARTMENT OF MAMMALS

RAYMOND L. DITMARS, *Curator*; JOHN TOOMEY, *Head Keeper*

An important series of purchases extended throughout the year and among the animals thus acquired were a pair of Dromedaries, a pair of Bactrian or Siberian Camels, a female Masai Giraffe, a male Kudu, a Blesbok, six American Prong-horned Antelopes, a Saiga Antelope, a South American Tapir, two Himalayan Black Bears, an American Black Bear, a Grizzly Bear, a pair of Lions, a Siberian Lynx, two Golden Cats, two Black-backed Jackals, two Lesser Pandas, a Giant Ant-eater and an Aardvark. Our Saiga Antelope represents a great rarity in zoological collections. This strange-looking creature has a pair of unblemished horns which closely approach the record for the species.

The annual list of births in the Park usually averages about fifty. During 1936, there were 52 births, as follows: one Rhesus Monkey, one Green Monkey, one Dingo or Australian Wild Dog, one Giant Bat, one Pigmy Hippopotamus, two Llamas, six Aoudads, one Mouflon, nine Hima-

layan Tahr, four Axis Deer, eight Red Deer, one Barasingha Deer, one Indian Sambar Deer, seven Fallow Deer, three Dybowski Deer, two Florida White-tailed Deer, one Lechwe Antelope, one Yak and one Chapman Zebra.

Numerous animals were acquired by donation and a detailed list of gifts appears in another part of this report.

Following is a census of the mammal collection, taken on December 31, 1936:

	Species	Specimens
Primates	33	62
Insectivora	1	1
Chiroptera	2	9
Carnivora	50	107
Pinnipedia	1	3
Rodentia	12	28
Proboscidea	2	3
Hyracoidea	1	5
Ungulata (Perissodactyla)	11	16
(Artiodactyla)	50	262
Edentata	4	5
Marsupialia	5	13
 Total	 172	 514

The series of unusual species of mammals in our Reptile House continues to thrive under the technique developed for the maintenance of small and delicate mammals of particular interest. The reason for keeping these creatures in the Reptile House is that this building has an abundance of sunlight, and automatically maintained temperature that rarely varies more than five degrees. Also, it has a high air content of humidity which these small, tropical mammals require.

Records for the breeding and longevity of the Golden Marmoset have thus been established; the Giant Bats, exhibited here for the first time, have survived the year without a loss and have bred and successfully reared the young; the series of blood-drinking Vampire Bats are entering their third year of observation, and the Haitian Solenodon continues to thrive. Possibly the most interesting among our especially exhibited small mammals is a Pigmy Marmoset (*Callithrix pygmaea*), brought to New York by Dr. and Mrs. Wolfgang von Hagen from Ecuador. This specimen represents the smallest known species of monkey

in the world. It is full-grown, as indicated by its relatively long canine teeth, yet its weight is but four and one-half ounces.

The department lost one of its veteran and most able keepers during the year, in the death of John Quinn, who had been in charge of the greater portion of the deer collection for thirty-seven years.

DEPARTMENT OF BIRDS

LEE S. CRANDALL, *Curator*; WILLIAM BEEBE, *Honorary Curator*;
SAMUEL STACEY, *Head Keeper*

As pointed out in the report of this department for 1935, rapidly changing world conditions are reflected in the flow of importations of birds and animals. The general effect has been a great reduction in numbers. In 1936, an unforeseen but interesting circumstance has had marked influence on the market. Great popularity of small tropical aquarium fishes resulted in a boom which caused many importers to bring in these little creatures in huge quantities. Resulting sharp competition and the ease with which many species may be bred in captivity, forced at least some dealers to turn to birds to bolster the profit margin on costly expeditions. In consequence, while most of the established dealers have shown marked quiescence, numerous fine shipments of birds have been brought in by former aquarium specialists.

Largely through the resulting fillip to the market, we have added to our collections during 1936 a total of thirty-one species new to us. Not since 1929 has this number been so great. Many of the arrivals, whether new to us or not, are of such importance as to be worthy of special mention. In point of size, a Saddle-billed Stork (*Ephippiorhynchus senegalensis*) comes first. Finest of all the storks, this tall species from tropical Africa is chiefly notable for the bright yellow fleshy shield or "saddle" that lies over the base of the upper portion of the beak.

The pheasant collection was strongly bolstered by a number of valuable accessions. Two were of outstanding importance: the Palawan Peacock Pheasant (*Polyplectron emphanum*) and Rheinhardt's Argus Pheasant (*Rheinardia ocellata ocellata*). The latter will be referred to again in this report. The Palawan is one of the rarest and most beautiful of this magnificent group. Small, graceful and dainty, the male is clothed in brilliant blues and greens, the gray tail being marked with iridescent ocelli. The female is a tiny creature, of an almost uniform pale, woody brown, only the "eyes" of the tail establishing her relationship. The first

specimens to be seen in captivity arrived in California in 1929 and the species is still so rare that it is seldom obtainable. Pairs of Elliot (*Syrmaticus ellioti*), Lineated (*Gennaeus lineatus lineatus*), Black-backed (*Gennaeus leucomelanos melanotus*) and White-crested (*Gennaeus leucomelanos hamiltonii*) complete the additions to our pheasant series.

The last Ruby-throated Hummingbird (*Archilochus colubris*) to be received at the Zoological Park came, enclosed in a milk bottle, in 1923. Since then, our efforts to obtain further specimens have been unavailing and our desire to try our newly-acquired feeding technique has had to rest unsatisfied. Curiously, in September, 1936, a hummingbird flew through an open window, high above the street, in a down-town office building and another entered a west side apartment. Both of these birds were eventually brought to us. They had been kept too long without proper food but one managed to survive. This bird we have now had for a little less than four months, in perfect condition, eclipsing by a wide margin our former rather unsatisfactory records with this species.

This Report would not be complete without at least one instance of the many strange and devious routes by which our birds may find their way to us. In June, an itinerant agent of a western dealer called, with the inevitable list. On it appeared an item described as a "Giant Cacique." There are many kinds of giant caciques and the representative, a lion trainer by profession, could add no details. The bird had been included in a collection purchased from a well-known resident of Hollywood. Nothing was known of its antecedents. Now there are some very fine species among the caciques and the thought of the possibilities of this bird was so alluring that we decided to risk the purchase. The first sight of the lovely creature that finally arrived brought back dimming memories of steaming Costa Rican jungles, of great, bronze-chestnut birds that hung their swinging nests on delicate branch-tips in forest giants, and defied our efforts to get near them. Wagler's Giant Cacique, the Oropendula of Central American vernacular, *Zarhynchus wagleri wagleri* to the systematist! Probably the first of his kind to be kept in captivity, this splendid bird seems even more beautiful than in those days of early 1914, when it could be viewed only with the aid of binoculars.

Through the cooperation of Mr. Albert M. Vida, wireless operator of the S.S. *City of New York*, of the American South African Line, Inc., we have been enabled to obtain many fine and desirable South African birds. During 1936, the most important specimens brought us by Mr.

Vida were two Secretary Birds (*Sagittarius serpentarius*), a Paradise Crane (*Anthropoides paradisea*), two Black-footed Penguins (*Spheniscus demersus*) and three South African Sheldrakes (*Casuarca cana*).

On June 1, Miss Gloria Hollister, returning from an expedition to British Guiana, brought us a fine collection of the smaller native birds, including thirty-one specimens of eighteen species. One of these, the Blue-backed Manakin (*Chiroxiphia pareola pareola*) was new to us. All of the manakins are rare in collections and this one, gaily colored in blue, black and flaming scarlet, was especially welcome.

In October, we were happy to receive a visit from M. Jean Delacour, the well-known French aviculturist. M. Delacour brought us, from his aviaries, the finest single collection that arrived during the year. This shipment was reviewed in detail in the *Bulletin* for November-December, 1936, so that only the more important items need to be mentioned here. Birds of paradise of three species, two of them not previously seen here, were included. The species new to us were the Curl-crested Manucode (*Manucodia comrii*) and the lovely, red-plumed Gray-chested Bird of Paradise (*Paradisaea decora*), both from Fergusson Island, southeast of New Guinea. The third was a fine male of the New Guinea Rifle Bird (*Crasedophora magnifica intercedens*) from southeastern New Guinea. This accession brought our total species of this group to fifteen. Two Purple Carib Hummingbirds (*Eulampis jugularis*), from the West Indies, have given us a new experience, since they are the first of these sprites that have proved large and hardy enough to inhabit a large flight cage with other birds of similar size. A pair of Rheinhardt's Argus Pheasants, referred to in a previous paragraph, must be considered as among the great rarities. This magnificent species was introduced into Europe from Annam through the personal efforts of M. Delacour, and it is the offspring of his own importations that have come to us.

Three important losses in the collection occurred by death during 1936, all these birds having established longevity records of interest. They were a Long-tailed Bird of Paradise (*Epimachus meyeri meyeri*), seven years and six months; a Blue Bird of Paradise (*Paradisornis rudolphi rudolphi*), seven years and nine months; and an Australian Catbird (*Ailuroedus crassirostris*), thirteen years and seven months.

The most notable breeding success of the year was the rearing of a young Great Argus Pheasant (*Argusianus argus*). This bird, a male, was hatched in July, and may now be considered well beyond the danger stage.

Severe damage to the roof of the Large Bird House, incurred during the heavy ice and snow storms of the winter of 1935-1936, necessitated extensive though only temporary repairs by the Park force. At the same time, the sheet iron bases of the cages that house our bird of paradise collection were renewed, relieving a condition that has been unsightly for several years.

SPECIES OF BIRDS NEW TO THE COLLECTION

Received During 1936

- Common Koklass Pheasant—*Pucrasia macrolopha macrolopha* (Lesson)
 Palawan Peacock Pheasant—*Polyplectron emphanum* Temminck
 Rheinhardt's Argus Pheasant—*Rheinardia ocellata ocellata* (Elliot)
 Philippine Hemipode—*Turnix suscitator fasciata* (Temminck)
 Iceland Gull—*Larus leucopterus* Vieillot
 Brown-headed Touraco—*Crinifer piscator* (Boddaert)
 Aruba Conure—*Eupsittula pertinax arubensis* (Hartert)
 Finsch's Amazon—*Amazona finschi* (Sclater)
 Clarion Island Burrowing Owl—*Speotyto cunicularia rostrata* (Townsend)
 Purple Carib Hummingbird—*Eulampis jugularis* (Linnaeus)
 Blue-throated Barbet—*Chotorhea versicolor* (Raffles)
 Gaudy Barbet—*Chotorhea mystacophanes* (Temminck)
 Panama Wagler Woodpecker—*Centrus rubricapillus wagleri* (Salvin & Godman)
 Blue-backed Manakin—*Chiroxiphia pareola pareola* (Linnaeus)
 Blue-tailed Pitta—*Eucichla cyanura* (Boddaert)
 Javan Hunting Crow—*Cissa thalassina* (Temminck)
 Gray-chested Bird of Paradise—*Paradisaea decora* Salvin & Godman
 Curl-crested Manucode—*Manucodia comrii* (Sclater)
 Blue-eared Glossy Starling—*Lamprocolius chalybeus chalybeus* (Hemprich & Ehrenberg)
 Blue-billed Weaver—*Spermophaga haematina haematina* (Vieillot)
 Black-rumped Grass Finch—*Poephila atropygialis atropygialis* Diggles
 Tri-colored Parrot Finch—*Erythrura trichoa trichoa* (Kittlitz)
 Philippine Parrot Finch—*Erythrura viridifacies* Delacour & Hachisuka¹
 Black-headed Waxbill—*Estrilda atricapilla atricapilla* Verreaux
 Black-crowned Waxbill—*Estrilda nonnula nonnula* Hartlaub
 Wagler's Giant Cacique—*Zarhynchus wagleri wagleri* (Gray)

¹ Bird received in 1936, but first described in B.B.O.C., LVII, p. 66, 1937.

- Blue-breasted Grenadier Waxbill—*Granatina ianthinogaster ianthinogaster*
Reichenow
 Sulphury Singing Finch—*Serinus sulphuratus sulphuratus* (Linnaeus)
 Chinese Beautiful Rose Finch—*Propasser pulcherimus davidianus* (Milne-
Edwards)
 Oregon Junco—*Junco oreganus oreganus* (Townsend)
 Golden-crowned Sparrow—*Zonotrichia coronata* (Pallas)

CENSUS OF BIRD DEPARTMENT
December 31, 1936

Orders		Species	Specimens
Struthioniformes:	Ostriches	1	2
Rheiformes:	Rheas	2	2
Casuariformes:	Cassowaries and Emus.....	2	8
Tinamiformes:	Tinamous	1	4
Sphenisciformes:	Penguins	1	1
Pelecaniformes:	Pelicans, Cormorants, etc.....	8	13
Ciconiiformes:	Herons, Ibises, Storks, Flamin- gos, etc.	27	64
Anseriformes:	Swans, Ducks, Geese and Screamers	51	304
Falconiformes:	Vultures, Hawks and Eagles	22	33
Galliformes:	Quail, Pheasants, etc.	62	132
Gruiformes:	Hemipodes, Cranes, Trumpet- ers, Rails, etc.	22	37
Charadriiformes:	Plovers, Sandpipers, Gulls, etc..	16	46
Columbiformes:	Pigeons, Doves and Sand-grouse	47	120
Cuculiformes:	Touracos and Cuckoos.....	6	8
Psittaciformes:	Parrots, etc.	70	146
Strigiformes:	Owls	4	8
Micropodiformes:	Hummingbirds	3	4
Coraciiformes:	Kingfishers, Hornbills, etc.	12	15
Piciformes:	Barbets, Toucans and Wood- peckers	22	31
Passeriformes:	Perching Birds	351	725
	Total	730	1,703

Summary: Orders, 20; Species, 730; Specimens, 1,703.

DEPARTMENT OF REPTILES

RAYMOND L. DITMARS, *Curator*; JOHN TOOMEY, *Head Keeper*

During the summer of 1936 the Curator spent his vacation period on the island of Trinidad, studying the life history of a strange frog, *Pseudis paradoxus*, which attains a huge size in the tadpole stage but ultimately shrinks to a quite insignificant frog. The tadpoles, which grow to a length of more than twelve inches, are to be found in only one small pond on the island. Much is still to be learned about the species. A few specimens were secured and photographs of the living tadpoles were made for the Society's files. As far as we are aware, these are the first photographs of the kind ever made. Other amphibians were procured during the trip through the West Indies.

The year was noteworthy in the addition of particularly interesting and valuable specimens. Early in the year a huge Reticulated Python was purchased and we believed it to be the largest snake ever to arrive in the United States. It is in excess of twenty-six feet in length and on arrival weighed 191 pounds. It was rather thin at the time and for a while refused to feed. The purchase of this snake was attended with a certain amount of anxiety, as it had a sore mouth at the time, but careful treatment relieved the latter condition and by midsummer the big reptile was taking food at regular intervals. We now estimate its weight at close to 300 pounds.

Our series of African cobras has been impressive, with a great variety of colors and patterns, but among the elapine snakes the Black Mamba has attracted the most attention. It is the first specimen of this particularly active and aggressive serpent ever to be exhibited at the Park, although there have been many inquiries from visitors and correspondents who have read books on Africa, about our lack of this notorious species which appears to be Africa's most deadly reptile. Apparently most collectors are afraid to attempt to capture it. We frequently exhibit the Green Mamba of western Africa, but this species is quite different in appearance and actions.

A fourteen-foot King Cobra was purchased during the year, also another smaller specimen. Many South America reptiles were added to the collection, including a fine series of Emerald Tree Boas. In a reptile house, these snakes are as outstanding and vivid as birds of paradise in an ornithological collection.

In October we had the pleasure of entertaining Mr. E. G. Boulenger,

Director of the Aquarium in the Zoological Gardens of London and a noted writer about reptiles. Previous to his visit we received a collection of European snakes from the London Zoological Gardens and when Mr. Boulenger returned to England in November we gave him a pair of large Gila Monsters to take to his institution.

Mr. Albert M. Vida, radio operator of the motorship *City of New York*, has continued to bring us valuable collections of South African reptiles. A Gaboon Viper thus acquired gave birth to twenty-seven young during the summer, a Puff Adder to forty-one young, and another Puff Adder had thirteen young. The overabundance of young snakes and the amount of food required, made it necessary to distribute some of the infants among other zoological parks that have reptile collections.

Losses during the year were slight but the most disappointing death was that of our young Bushmaster (*Lachesis muta*), brought by the Curator from Trinidad in 1935. Previous efforts to keep Bushmasters in captivity, here and elsewhere, had been unsuccessful as without exception captive specimens refused to eat. This specimen fed sixty-five times and increased from a length of fifteen inches to almost four feet. Its death was caused by internal parasites which invaded the heart area.

Aside from his regular work at the Park, the Curator rewrote "The Reptiles of North America," a book of close to a quarter of a million words. He first produced this book twenty-eight years ago and it soon became a national standard, being reprinted many times. The preparation of the rewritten edition brings the nomenclature up to date, provides new keys for identification and embraces new observations, and took close to two years of intermittent work.

Following is a census of the reptile collection, taken at the close of 1936:

	<i>Species</i>	<i>Specimens</i>
Class Reptilia:		
Loricata (Crocodiles and Alligators)	3	37
Squamata (Suborder Sauria—Lizards)	12	24
(Suborder Ophidia—Snakes)	55	155
Testudinata (Turtles and Tortoises)	22	114
Class Amphibia:		
Caudata (Salamanders and Newts)	1	1
Salientia (Frogs and Toads)	6	21
Total	99	352

A condensed census of the animals in the Zoological Park, taken on December 31, 1936, is as follows:

	<i>Species</i>	<i>Specimens</i>
Mammals	172	514
Birds	730	1,703
Reptiles and Amphibians	99	352
Total	1,001	2,569

REPORT OF THE VETERINARIAN

The death on January 16, 1937, of Dr. Charles Victor Noback, the Zoological Park's Veterinarian, occurred before the department's report for 1936 had been prepared. It was found to be impossible for anyone else to compile an accurate and complete report, and for that reason the Report of the Veterinarian for 1936 is omitted.

DEPARTMENT OF ADMINISTRATION

H. R. MITCHELL, *Manager*; WILLIAM MITCHELL, *Cashier*

The 1936 City Budget carried an appropriation of \$260,533.92 for maintenance of the Zoological Park, which was \$950.00 less than allowed in the 1935 Budget. The Zoological Society was obliged to reduce its appropriation supplementing the City allowance from \$65,000, allowed in 1935, to \$63,000, which made the total sum available for maintenance operations \$323,533.92.

Early in the year it was realized that this sum would not be adequate for our needs, due principally to rising prices of many items which we require in considerable quantities. By the first of November it was found that further appropriations were necessary for forage and veterinary supplies (food for animals) and for general plant materials; and an application was made to the Board of Estimate for \$5,250 for forage and veterinary supplies, and \$750 for general plant supplies. This application was supported by a statement showing separately the additional cost of maintenance for 10 months, due to increased prices and to additions to our collections; after investigation by the Examiner the Budget Director's office made a favorable recommendation, and on December 4 the additional amount requested for these two items was allowed by the Board of Estimate. These supplemental allowances made it possible for us to close the year within our supply appropriations. The sum of \$1,511.17

reverted to the City from Personal Service Account, due to lost time or to salary reductions made for other causes.

The City's 1937 Budget allows us a total of \$259,338.92, a reduction of \$1,195.00 below the 1936 Budget. This reduction in 1937, however, is more than offset by an arrangement by which our bills for electric light and power, and for gas consumption are to be rendered to and paid by the Department of Water Supply, Gas and Electricity at the new low rates now in effect for the City's service in all its activities. As a result of this arrangement the item of \$3,000.00, which had previously been granted in the Budget annually for Light, Heat, and Power, was omitted from our appropriation in the 1937 Budget.

ACCOUNTS AND AUDIT

There were no new funds established and no changes of importance in accounting during the year. The usual quarterly audit was conducted by our Auditors, Peat, Marwick, Mitchell & Company, and their report appears elsewhere in connection with the Treasurer's report and the report of the Audit Committee.

Several work projects were carried on by W.P.A. forces during the year, and in some cases, to facilitate the work, materials were supplied from our stocks or purchased through our General Plant Materials Account. Except for the limited amount of materials supplied by us, expenditures for these projects did not pass through the Society's books and are not included in the Treasurer's report.

ATTENDANCE

The attendance figures appearing in detail elsewhere show a reduction of 7 per cent. as compared with 1935. This decline in attendance is more than accounted for by unfavorable weather conditions in the month of June, alone, in which the attendance was 113,212 below the same month in 1935. The first six months of the year indicated a serious falling off in attendance, due largely to weather conditions. On July 1 we were 230,000 below the same period in 1935; but substantial gains were made in the last half of the year.

PURCHASE AND SALE OF ANIMALS

Expenditures for the purchase of animals for the year were \$20,-918.46 compared with \$16,530.28 in 1935 and \$9,267.86 in 1934. As

will be noted by these increased figures, the collection is gradually being brought back to normal figures. Numerous rare and important specimens were added to the collection during 1936. Notwithstanding the increased expenditure for additions to the collections, the year closes with sufficient funds available during this coming year to meet any reasonable requirements.

PRIVILEGES

While conditions during the past year were far from satisfactory for greatly increased sales in Park privileges, which consist very largely of non-essentials, we feel encouraged to be able to report that, while the attendance was more than 7 per cent. under 1935 figures, the gross privilege business for 1936 showed a small increase. However, there was a very satisfactory gain in net profits of 24 per cent. for the year.

Our plan for increasing accommodations for lunch and basket parties at the Lunch Pavilion by the addition of terraces on the same level as the existing floor, has been approved as a W.P.A. project and it is hoped that this improvement may be completed in time to be made available for the coming season.

During the year a substantial and very desirable improvement was completed by W.P.A. labor at this Pavilion, consisting of the replacing of all the rustic supports with substantial stone pillars.

SODA WATER

This division of the privileges was 2 per cent. below the previous year in volume, but due to careful operation a substantial gain was made in the net results.

The remaining improvements planned for our ice cream plant have been completed, including the equipping of a small shop and work room where minor repairs to our operating equipment can be carried on during the winter.

AUTOMOBILE PARKING

There was a reduction in receipts from this source of 14 per cent. and a corresponding loss in the net results. Early in the season a line of drain tile was put in along the east side of the Parking space to take care of seepage from the rock ledge to the east, which resulted in a decided improvement in a condition that had given us considerable trouble.

The cost of this item contributed to the reduction in the net results of the year's operation.

During the last half of the year automobile traffic on Boston Road has greatly increased, because of the opening of the Triborough Bridge, and we anticipate that this direct route from Long Island will materially add to the number of our visitors from that section in the coming year and will undoubtedly increase parking receipts.

ROCKING STONE RESTAURANT

Conditions which have been so difficult for restaurants operating without an alcoholic beverage license continue to affect the results at the Restaurant. Menu prices were reduced to meet the situation, but the cost of supplies has advanced sharply. Receipts were 2 per cent. less, and the net result was a loss of 11 per cent. in excess of last year.

BOAT HOUSE RESTAURANT

The practice of seasonal operation for the Boat House Restaurant, which was in effect last year, was continued again in 1936. Gross business was 50 per cent. over last season, but owing to downward revision in menu prices and to the increased cost of supplies, the net result was about the same as in the previous season.

BOATING

The receipts from boating failed to continue the gain that has been made during the past two years. Receipts were down slightly more than 5 per cent. and net results, 6 per cent. The entire boating equipment was carefully repaired and painted during the fall and winter, and is now in as good condition as possible, considering the fact that most of our boats have been in use for some years and no new equipment has been purchased for six or seven years.

Some new equipment should be added in the near future or as soon as conditions justify the expenditure.

GATE RECEIPTS

Receipts for admissions on pay days were practically the same as in 1935, amounting to \$11,550.10. An Improvement & Repair Budget of \$12,000 was approved, to be expended from funds received from this

source; but expenditures were only \$10,800.07, or \$745.03 less than the receipts.

An emergency or supplemental expenditure of \$2,786.35 was authorized for a new floor in the Reptile House, to be paid for from the surplus of \$6,329.71 in the Improvement & Repair Account on January 1. The year closed with a balance of \$4,018.39.

GUIDE BOOKS

Sale of Guide Books in 1936 increased about $6\frac{1}{2}$ per cent. against a decrease of 7 per cent. in attendance.

While the present edition of the Guide Book will probably be sufficient for the coming year, we again wish to urge that preparations be made to commence work during the coming year on the revision of the Guide Book, to be completed before the next edition appears, which we suggest should be in the form of a special World's Fair Edition.

POSTAL CARD AND MISCELLANEOUS PUBLICATIONS

Sale of souvenir postals and miscellaneous publications increased 13 per cent., and the profits were 15 per cent. above 1935.

A new issue of more than a million and a quarter souvenir postal cards is in process of printing. A half-dozen new subjects have been added to replace some of the less interesting pictures and bring the series up to date. The new issue will be offered in ten cent cellophane packages, as well as in the former twenty-five cent sets, and we anticipate that greatly increased sales will be effected in this way. It is hoped that a new special book of animal photographs, selected from the Society's outstanding collection, can be added to our miscellaneous publication group.

Plans are in progress for the new edition of the Album for the Animals in Art Stamps.

RIDING ANIMALS

This branch of privileges made a gain of 12 per cent. and a most satisfactory showing in profits during the year. Richard Martin, who had been in charge of the riding animals for several years, was offered a position as Keeper in the Animal Department, which gives him more opportunity for advancement than in this department. Michael Wolf, who has been with us for about three years, was selected for the vacancy.

BABY CARRIAGES

Receipts for rentals of baby carriages were again lower than last year, but there was a gain of 9 per cent. in the net, due to lower expense for repairs and upkeep, on account of new equipment that was added in 1935.

DEPARTMENT OF FORESTRY AND CONSTRUCTION

CHARLES J. RENNER, *Chief Constructor & Engineer*; FRED W. MINGST, *Assistant Constructor*; MICHAEL E. O'KEEFE, *Assistant Forester*;
GEORGE SKENE, *Head Gardener*

Besides the usual work which must be attended to each year, consisting of hauling, cleaning and maintaining, there were completed certain repairs and replacements as described below. In some of the work the men were assisted by the Works Progress Administration, whose men in addition, under Mr. William Alt, their superintendent, rebuilt the Picnic Pavilion opposite the Boat House, which had been destroyed by fire last February; and a new north wing to the Rocking Stone Restaurant, which had been uninhabitable for several years. Both jobs were much appreciated.

The regular work done by the Park forces was as follows:

Fences: At the Asiatic and Red Deer Ranges, 1,500 feet of fence and 75 posts were replaced, while numerous minor repairs were made to the fences and gates of the Elephant, Yak, Zebra, Buffalo, Virginia Deer, Mountain Sheep and Tortoise corrals, as well as repairs to the boundary and guard fences surrounding the Park. The low fence surrounding the Wild Fowl Pond was overhauled and repaired. The pipes and posts of this fence are very old and will soon have to be replaced.

Cages: A new bear cage, about 17 x 24 feet, fitted upon concrete foundations, with a sleeping den of rock face at one end, was built. It has a top of iron bars, and has been modelled to enclose the animals completely. There were some repairs and reinforcements made to the cages at the other bear dens. It is expected that these will soon be improved and rehabilitated. The Lion House cage inside partitions and sliding doors, the Elephant House cage fronts, the Pheasant cage partitions, Small Deer cage fronts, were repaired.

Walks: Only a small amount of repairs were made to the roads. It was expected that there would be much work done, but the W. P. A. project, which had been approved, was delayed through pressure of work elsewhere. It is hoped it will be resumed in the coming Spring.

Cement Work: The brick and stonework of the Antelope House was repointed. About 120 running feet of new concrete plant flats were constructed in the conservatory at the Reptile House, replacing the wooden ones which were decayed, and adjacent to these a new concrete bottom was constructed in the Alligator Pool, with new railings and replacements of the ironwork. All the cement work of the Zebra House stalls was repaired. 132 feet of new cement gutters were built along the west side in front of the inside cages of the Small Deer House. New floors of concrete were constructed in the Large Bird House dome cage, in two of the Lion House cages, and in the Bear Den sleeping shelters. Repairs were made at the Eagles' Aviary drinking basins, the Snake Island, the Italian Garden steps and stonework, and also at the Lydig Arch and the Boston Road Plaza steps. There were made and installed 20 cement food and drinking troughs with 40 standards. The water supply inlet on the east side of the Wild Fowl Pond was rebuilt.

Roofs and Gutters: The Lion House gutters were repaired and extensive work was done on the Large Bird House roof. These buildings both need new roofs, as they use a considerable amount of the maintenance force's time to the exclusion of other work. The Antelope House roof was also repaired and inspected with considerable care. It is fast reaching the point, through age with consequent erosion, where it must be replaced entirely. Skylights were repaired on the Lion House, Yak House, Large Bird House, Antelope House and Animal Hospital during the year.

Guard Wires: 700 new heavy guard posts were set and about 10,000 feet of guard wire stretched.

Plumbing and Heating: New boilers were installed in the Service Yard Garage and in the caretaker's residence. New boiler sections were installed in the Lion House and the Small Deer House, and one in the Large Bird House was repaired by electric welding, a new process with the Park. So far it is all right. The boiler fireboxes of the Lion and Elephant, and the Heads & Horns buildings were relined with fire brick. This seems necessary every few years where we have oil burner systems installed. At the Nursery greenhouse, where the entire wooden base was replaced with a new one of concrete and brick by the W. P. A. forces, the heating plant was overhauled, the result of all being considerable improvement in the temperatures.

The plumbers also laid and joined 700 feet of gas pipe from Bronx

Park East to the Nursery buildings and provided heating and water pipes to the north wing of the Rocking Stone Restaurant. They overhauled the heating system of the Mammal and Ostrich houses. New flues were made and replaced at the Elephant, Primate, Administration, Yak, Nursery Brooder, Rat and Cook houses, Blacksmith's and Paint shops, Pavilion No. 3 and the various entrances. New water mains were laid in the Animal Hospital, the Upper Bear Dens, the Elk Range and at the Pony Field, all of these to replace old pipes no longer serviceable. Other considerable repairs consisted of relieving stoppages in sewers, and troubles in the toilets and drinking fountains throughout the park.

Carpentry: The Park was unfortunate this year in having two fires, both of which occurred at night and did considerable damage. One consumed the Picnic Pavilion and happened in February, and the other burned away the top of the center building at the Nursery greenhouse and happened in July. The W. P. A. forces replaced the pavilion but the carpenters had to rebuild the Nursery quarters; a considerable amount of work, in addition to the regular tasks, which included laying two oak floors in the Lion House cages, making 21 large tree plant tubs, laying six floors in the Bear Den shelters, setting and placing in the ranges and corrals 10 concrete feed troughs previously made in the shop, and repairing both the portable and concrete benches. They also made new horse stalls in the stable building, a new snow plow, repaired the Raccoon and the Wolf Den shelters and installed or repaired numerous sleeping shelves in the various buildings.

Painters: The force of painters this season was augmented until about June with a number of W. P. A. workers. Most of the time in the Spring was used in repairing with roof cement the leaky roofs and in scraping and painting with two coats of paint 108 portable benches, and also in renovating all of the seven Zoological Park trucks. These trucks were first gone over and repaired completely by the mechanical department, which replaced worn out parts. Several trucks are very old and should be replaced. Another operation which greatly occupied the painters throughout the year was replacing broken glass in skylights, and on the Bird House roof, where the especially severe storm of last year caused much of it to break. The outside painting consisted of scraping and applying two coats of paint to three of the outside Primate cages and the outside barriers, the Administration Building railing, all the Pheasant Aviary cages, the Mammal House cages, 2,000 feet of range fences, the Baird

Court flagpole, the caretaker's residence and the Nursery greenhouse. Interior painting consisted of renovating the north end of the Large Bird House, the Bird Curator's office, the Heads & Horns lower exhibition hall and stairways, the Primate House east cages and feed room, the Lion House keepers' feed and studio rooms, and the Aquatic and Mammal House keepers' rooms. The night watchmen's central quarters were also done. Glass, to the amount of approximately 2,600 square feet, was reset at the Mammal House, the Primate House and the Small Deer House, in addition to what was replaced as described above. Other things as regraining doors, painting guard posts, priming or varnishing shelves and such were also performed.

Gardening and Forestry: The garden beds and window boxes were planted as usual, using the Spring and Summer flowering annuals raised in the Park's Nursery. The large decorative palms, bamboos, bay trees, etc., in the buildings received constant care and in the summer were placed about the grounds. Sixty young deciduous trees were transplanted from the Nursery to the deer ranges and at random locations in the Park, while the area south and adjacent to the Boston Road Gate was replanted with 40 large evergreens after removing the old, scrubby ones previously there. Shrub and tree pruning continued throughout most of the year over a greater part of the Park area with some cavity and bracing work also accomplished. About sixty dead trees were taken down this year and the wood sawed and split for furnace use.

Tree spraying was done extensively and tent caterpillar egg masses destroyed in large numbers. Beetle traps were used again and in some areas ground treatment, with chemicals, was resorted to in an effort to keep down an ever-increasing number of Japanese beetles. Watch was kept for the gypsy moth. The Park was again assisted by the New York State Department of Agriculture, which sprayed and closely inspected locations formerly infested. The work apparently succeeded somewhat as there seems to be no sign of recurrence so far, though an inspection for indications of the presence of the moth larva was recently made. The Dutch Elm Disease Commission of the U. S. Department of Agriculture made several surveys to locate trees affected with the Dutch elm disease, and subsequently five trees were destroyed, in accordance with their instructions. These trees were taken from among those suffering from the various wilts or otherwise in poor condition and were found on test to be infected. The Government and the Park forces have done considerable

sanitation work in their drive to save the elms. There are approximately 1,500 such trees in the Park.

Miscellaneous: A new reinforced concrete floor in the Reptile House was installed jointly by the Park and the W. P. A. forces, replacing the old one which was cracked and broken. Upon this a new terrazzo floor was laid by the Kompolite Company. In the shops special guards of sheet iron and wire were constructed around the machinery to conform to the desires of the safety engineer of the insurance company who inspected same. A new ice breaker was placed on the Large Bird House and later the 400-ft. low fence on Boston Road north of the Buffalo Entrance was reset in concrete. The Beaver Pond embankment was repaved in places and regraded. The Works Progress Administration forces removed the 20 wooden supports of Pavilion No. 1 and replaced same with cut stone pillars about two-foot square; a considerable improvement in the appearance and safety of the building. This organization also built a 60-ft. reinforced concrete bench in the Nursery greenhouse, seven brick cold frames nearby, and repaired a stone wall at the Bronx River and 180th Street. They made 107 concrete bench leg standards, which are now being set in Baird Court. The Water Department laid an 8-inch water main from Bronx Park East across the Park Department area to the Nursery, connecting with the 6-inch pipe line coming in from Boston Road, which eliminates the dead-end and gives better circulation.

In closing this report attention is called to one of the principal aids given to the Park which is furnished by the Association for Improving the Condition of the Poor, which sends some of their case men to do light jobs, principally cleaning and paper picking. Their work has a considerable bearing upon the general appearance of the grounds and is very much appreciated.

DEPARTMENT OF EDUCATIONAL ACTIVITIES

CLAUDE W. LEISTER, *Curator*

It is again possible to report an increase in the demands for service made to this department. Report cards returned by teachers borrowing our lantern slides and motion pictures show that a total of 77,335 children were reached by this service to city schools. Numerous letters are on file expressing the teachers' appreciation for the general excellence of this material and its availability.

The number of classes visiting the Park during the year was well in

excess of that recorded for 1935 when the attendance was sub-normal. The registration of classes coming from outside of New York City was almost double that of the preceding year when persistently inclement weather cut down the number of bus excursions from nearby localities. There was also a marked increase in the number of non-school organizations visiting the Park. The attendance of organized classes and other groups during the year was as follows:

	Attendance
School groups from New York City	384 13,722
School groups from other localities	375 16,813
Local non-school organizations	113 3,956
Suburban non-school organizations	47 1,562
Total organized groups visiting the Park	919
Total in groups from New York City	17,678
Total in suburban groups	18,375
Total children in visiting classes	36,052

"Behind the Scenes" trips through the Zoological Park, paying special attention to the Reptile House, Small Mammal House, Chef's Headquarters and the Hospital, were again a feature of our work with visiting classes. During the spring season, while the Reptile House was closed for repairs, we were not able to accommodate a number of classes desiring to see that collection. Later on, in the fall, pending repairs to the Hospital, no trips were scheduled to visit that building.

Teachers in charge of all visiting classes were given at the entrance gates a copy of the *Zoological Park News*, a mimeographed account of new exhibits or especially rare and interesting accessions to our collections. In order to keep this information up-to-date six numbers of the *News* were made available during the spring and early summer. From the response this effort received, it apparently successfully answered the universal question "What's new or especially interesting today?" It also proved to be of considerable assistance to our gatemen in answering the same and other questions.

The department cooperated with the American Institute by continuing the course "A Study of Wild Animals." Two groups of Junior High School Science Club members were taken care of during the year. Saturday morning sessions were held during the early spring and fall. The course has been requested again for 1937.

Early in the summer a 16 mm. Ciné Kodak Special camera was purchased for the use of the department. It was felt that 16 mm. apparatus

could best satisfy the demand for school film subjects. This equipment is expensive but beautifully made and capable of turning out the finest kind of 16 mm. photography. About 800 feet of black and white film was exposed on various Park activities during the summer and a start has been made on three subjects for school use.

Athanasius Kircher unwittingly became the father of visual instruction when he invented the magic lantern, which he called the *Magia Catoptrica*, in 1640. What an amazing time he would have today if it were possible for him to see and examine the latest pieces of apparatus used in motion picture photography! Kircher's invention remained practically a toy for household amusement during the next two hundred years. Gradually it came into use for educational purposes.

The motion picture really began with the invention of the phenakistoscope by J. A. F. Plateau in 1831. His device made use of drawings, much like the animated cartoons of today. Plateau worked so assiduously over his invention, peering into this and that contraption, that he finally became totally blind.

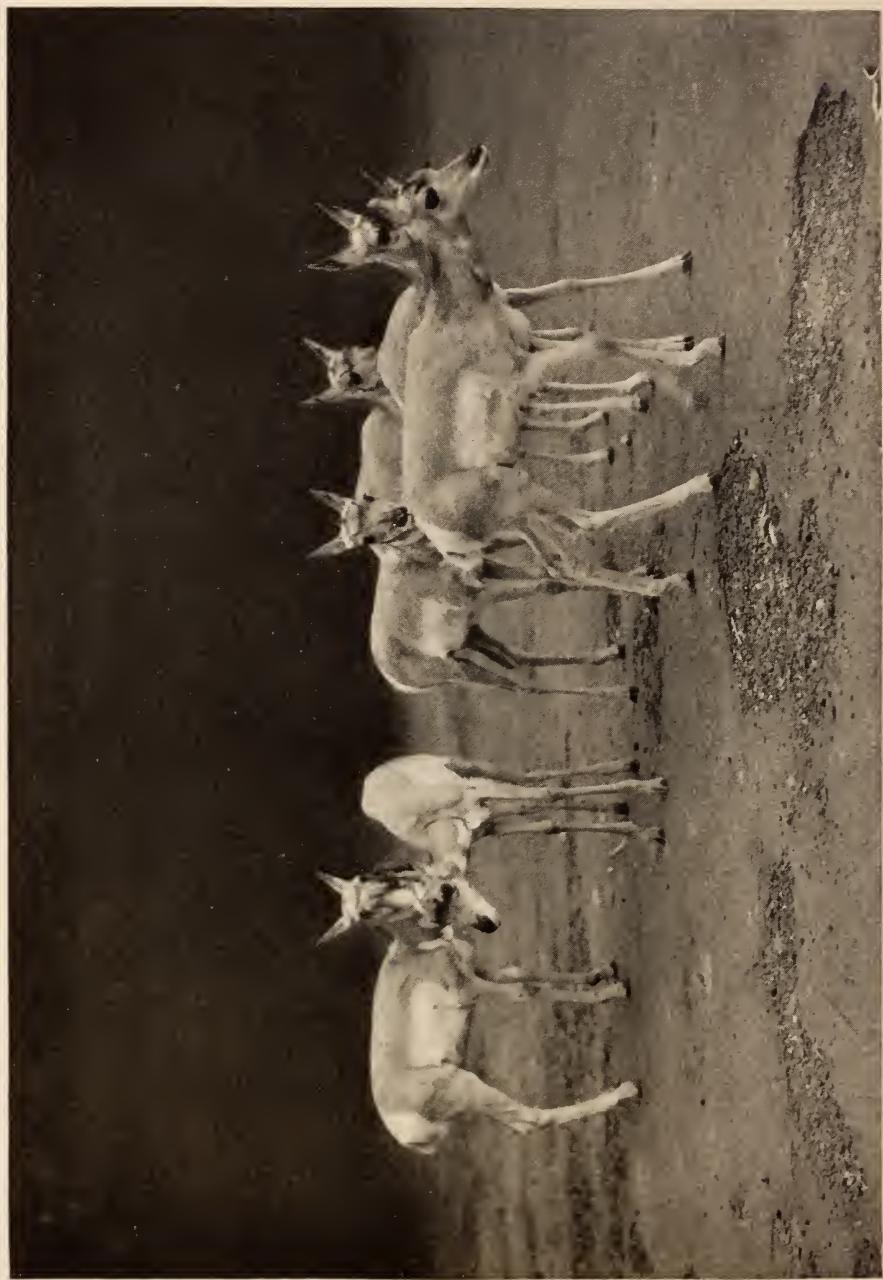
The latest development to add effectiveness to the motion picture has been the production of pictures in full color. Technicolor, the process used by the motion picture industry, is extremely effective and gives magnificent results but it is too complicated and expensive for general use. Even the smaller motion picture producer, who is the usual maker of educational pictures, finds it too expensive. As a result there are no educational subjects in Technicolor.

The recent 16 mm. color process, called Kodachrome, more or less settles this difficulty. Kodachrome pictures are remarkably faithful in color rendition and good results can be obtained with any 16 mm. camera. As yet Kodachrome films can not be duplicated and the cost is high. But colored films are sometimes so desirable that the cost of Kodachrome is not prohibitive. When these films can be satisfactorily duplicated school movies in color will be in great demand.

During the summer months a considerable amount of time was spent experimenting with Kodachrome film. The results were generally excellent and a full length film was made for use at the annual meeting of the Zoological Society. 16 mm. films could scarcely receive a harder test but in spite of the vastness of the auditorium and other adverse conditions the pictures on the screen were surprisingly clear and bright. 16 mm. movies in full color have undoubtedly arrived.



Owl Monkey or Douroucouli (*Aotus trivirgatus*). One of the few species of monkeys that are largely nocturnal. It lacks prehensile power in the tail—a development common among monkeys of the American tropics. Insects and their larvae form a considerable part of the diet.



American Prong-horned Antelope (*Antilocapra americana*). Young specimens born on the ranch of Charles Belden in Pitchfork, Wyoming. This rather small ungulate of the western plains is characteristic in that both sexes have horns, the outer or horny structure being shed annually and new horns forming on the permanent bony cores.



Lesser Panda (*Ailurus fulgens*). This is a particularly interesting animal, about the size of a raccoon. Together with a large and bear-like species, it stands in a family by itself, midway between the raccoons and the bears. It inhabits the eastern Himalayas.



Cape Hedgehog (*Erinaceus frontalis*). Numerous kinds of hedgehogs inhabit Europe, Asia and Africa, with the greater number of species in the latter continent. The animal figured occurs in the southern part of Africa. Its food consists of insects and small reptiles.



Otter (*Lutra canadensis interior*). The American otter, represented by several races or subspecies, inhabits North America from coast to coast. This semiaquatic animal has broadly webbed feet. Its food consists of fish, frogs and fresh-water crustaceans.



Meerkat (*Suricata tetradactyla*). A South African species closely allied to the various kinds of mongoose. The head is rather characteristic in having a sharp and protruding snout, with eyes situated well forward. Like all of the mongoose allies, the food consists of reptiles, small rodents and insects.



Greater Kudu (*Strepsiceros strepsiceros*). Young male of a species of larger antelope which inhabits Africa from the Cape northwards to the Anglo-Egyptian Sudan. The color of this fine species is pale gray, vividly ringed with white. The horns develop in spiral form.



Siberian Lynx (*Felis lynx*). This fine species once inhabited a considerable part of Europe but is now practically exterminated except in the extreme northern portions. Its range extends from the Atlantic coast into Asia north of the Himalayas.



Lechwe Waterbuck (*Kobus leche*). Young male, born in the Zoological Park on August 26, 1936. The Lechwe is one of the smaller species of African waterbucks, ruddy brown in color, the male with relatively short, hook-shaped horns.



Tayra (*Tayra barbara*). A tropical American representative of the family to which the weasel, otter, martin and wolverine belong. The body is about two feet long, black or dark brown, the head whitish or tan. The range extends from southern Mexico through the greater part of tropical South America.



Chapman Zebra and Young (*Equus burchelli chapmanni*). The young zebra was born in the Zoological Park on May 1, 1936. The group of Burchell Zebras is distinguished by its members either lacking or having much fainter leg stripings than other species of their genus.



Dybowski's Deer (*Sika bovinorum*). The example shown is a mature female. This species has been regularly bred in the Park. Its range covers northeastern Asia, including China and Manchuria.



Rhinoceros Viper (*Bitis nasicornis*). One of the most deadly snakes of tropical Africa. The length is three to four feet and the form relatively stout. Coloration is very striking, the general hue greenish with bright blue saddles on the back, bordered with red.



Giant River Turtle (*Podocnemis dumerili*). These big turtles inhabit the Guianas and the Valley of the Amazon, where they are very numerous. Specimens of close to a hundred pounds in weight are not uncommon. They lay large numbers of eggs, which form an important source of food for the Indians.

Blue-tongued Lizard (*Tiliqua scincoides*). An Australian species and the second largest of the skink family. It attains a length of two feet, which is exceeded only by a species of *Egernia* (also Australian), nearly a yard long.





Tropical Tree Frog. This South American representative of the specialized, climbing *Hylidae* is particularly remarkable in its protective coloration. The body hue is leaf green but the abdomen is margined with a shadowy, purplish hue which is also on the lower portions of the limbs and covers the feet, thus breaking up the creature's outline.

South African Wood Owl (*Strix woodfordii woodfordii*). This bird was obtained in Portuguese East Africa by Alfred M. Vida, wireless operator of the MS City of New York. It was still in juvenile plumage (left) when it arrived here on January 5, 1937, but had assumed the adult coloration (right) by March of the same year.



Hammerhead (*Scopus umbretta bannermani*). This curious bird, while related to the storks and herons, forms a little family of its own. Its huge stick nests, sometimes six feet in diameter, are a conspicuous feature of the landscape in the sections of Africa in which it lives.





Black Ducks on the Wild Fowl Pond. During the recent severe winters the feeding of hordes of visiting Black Ducks has become a serious problem for our commissary. The mild weather of the season of 1936-37 caused a great reduction in the numbers of these invaders, although we still entertained several hundreds.



Crested Seriema (*Cariama cristata*). The Seriemas are assigned to the Order of Cranes but appear to have no really close relatives. They inhabit southern South America.



Greater Magpie Tanager (*Cissopis leveriana major*). This handsome Tanager is named, of course, from its striking color resemblance to the Magpie. It is a forest species, and rare in collection.



Secretary Bird (*Sagittarius serpentarius*). The Secretary Bird is famous as a killer of snakes. It is now given the protection it deserves, throughout most of Africa.



White-winged Chough (*Corcorax melanorhamphus*). While this bird lives chiefly on the ground, its nest is built of mud, straddled on a horizontal branch. This specimen has lived in our collection since December, 1921.



Goliath Curassow (*Pauxi pauxi*). While all of the Curassows are large and handsome birds, the Goliath is the most striking, by virtue of the dark blue bony knob at the base of the bill.

DEPARTMENT OF PUBLICATION AND PHOTOGRAPHY

WILLIAM BRIDGES, *Editor and Curator of Publications*; ANNIE R. NEWMAN,
Assistant; EDWARD R. OSTERNDORFF, *Photographer*;
EDNA E. RICHARDSON, *Assistant*.

As forecast in this department's report for 1935, the Society's technical publication, *Zoologica*, was changed in form and publication program during 1936.

Instead of being published under separate covers and at such irregular dates as they were presented for publication, the Society's scientific contributions now appear in four quarterly parts constituting one volume each year. The final part contains a title page, table of contents and index and thus goes out ready for binding.

On making a change to the new publication schedule, the page size was increased slightly and a different style of text type adopted so that about 80 per cent. more text can be printed in an equal number of pages.

The result is a journal that is not only more economical to print, but has the advantage of regularity of publication, conformity with the practice of many outstanding technical journals here and abroad, and of presenting the scientific work of the Society in a simpler, more convenient and more impressive form.

Following is a list of papers published in *Zoologica* during 1936, in Volume XXI; the first to appear in quarterly form:

Part 1. April 8, 1936

1. The reproductive habits of the North American sunfishes (Family Centrarchidae). *Breder*. 48 pp., 7 pl., 6 text-figs.
2. Polychaetous annelids from the vicinity of Nonsuch Island, Bermuda. *Treadwell*. 20 pp., 3 pl.

Part 2. July 9, 1936

3. Bermuda Oceanographic Expeditions. Individual Nets and Data, 1932-1935. *Beebe*. 5 pp.
4. Plankton of the Bermuda Oceanographic Expeditions. I. *Wailes*. 6 pp.
5. II. Notes on protozoa. *Wailes*. 4 pp., 2 pl.
6. III. Notes on polychaeta. *Berkeley*. 3 pp.
7. IV. Notes on copepoda. *Wilson*. 5 pp.
8. V. Notes on schizopoda. *Tattersall*. 2 pp.
9. VI. Bathypelagic nemerteans taken in the years 1929, 1930 and 1931. *Coe*. 17 pp., 10 pl., 1 text-fig.
10. Tissue culture and explantation in nature; a review of certain experiments and possibilities. *Breder*. 10 pp.
11. Preliminary note on the nature of the electrical discharges of the electric eel, *Electrophorus electricus* (Linnaeus). *Coates & Cox*. 4 pp., 1 text-fig.

Part 3. Oct. 15, 1936

12. The morphology, cytology and life-history of *Oodinium ocellatum* Brown, a dinoflagellate parasite on marine fishes. *Nigrelli*. 36 pp., 9 pl., 5 text-figs.
13. The winter movements of the landlocked alewife, *Pomolobus pseudoharengus* (Wilson). *Breder & Nigrelli*. 11 pp., 6 text-figs.
14. Systematic notes on Bermudian and West Indian tunas of the genera *Parathunnus* and *Neothunnus*. *Beebe & Tee-Van*. 18 pp., 7 pl.
15. Food of the Bermuda and West Indian tunas of the genera *Parathunnus* and *Neothunnus*. *Beebe*. 11 pp., 3 pl.
16. Notes on the biology and ecology of giant tuna, *Thunnus thynnus* Linnaeus, observed at Portland, Maine. *Crane*. 6 pp., 1 pl., 1 text-fig.
17. The Templeton Crocker Expedition. I. Six new brachyuran crabs from the Gulf of California. *Glasell*. 6 pp.
18. Neoplastic diseases in small tropical fishes. *Smith, Coates & Strong*. 6 pp., 3 pl.

Part 4. Dec. 31, 1936

19. The southwestern desert tortoise, *Gopherus agassizii*. *Grant*. 5 pp.
20. Plankton of the Bermuda Oceanographic Expeditions. VII. Siphonophora taken during the year 1931. *Totton*. 10 pp.
21. The female bitterling as a biologic test animal for male hormone. *Kleiner, Weisman, Mishkind & Coates*. 10 pp., 1 pl., 1 text-fig.
22. Some tropical fishes as hosts for the metacercaria of *Clinostomum complanatum* (Rud. 1814) (=C. marginatum Rud. 1819). *Nigrelli*, 6 pp., 2 pl.
23. Caudal skeleton of Bermuda shallow water fishes. I. Order Isospondyli: Elopidae, Megalopidae, Albulidae, Clupeidae, Dussumieriidae, Engraulidae. *Hollister*. 34 pp., 53 text-figs.

Volume XXI of *Zoologica* contained 23 papers, a total of 296 pages, 48 plates and 74 text-figures.

At Dr. Beebe's special request Volume XX of *Zoologica* has been allowed to remain open for the inclusion of final papers on deep-sea fishes from his department. It is expected, however, that the last paper of that group will be published in 1937, and the volume will then be closed and indexed and in the future only one volume will be open at a time—the volume issued in quarterly parts.

One paper was published in Volume XX during 1936. It was:

3. Deep-sea fishes of the Bermuda Oceanographic Expeditions. VII. Family Serrivomeridae. *Beebe & Crane*. 50 pp., 20 figs., Nov. 30, 1936.

During the year *Zoopathologica*, a separate journal established in 1916 to carry articles on the diseases of animals, was merged with *Zoologica*. There had been no further publications in *Zoopathologica* since 1928 and the publication of all the Society's scientific contributions in one journal was decided upon both as a matter of economy and as a means of easing the task of bibliographers.

There was no change in the publication of the *Bulletin*, six numbers

appearing as usual. Volume XXXIX (1936) contained 256 pages and a title page, table of contents and index were included in the last number of the year.

On the photographic side of the department's work, the outstanding achievement was the completion by Mr. Osterndorff during the winter of 1935-1936 of a magnificent series of photographs of display postures of five species of birds of paradise. Selections from these were published in the *Bulletin* in the May-June number.

The Park's photographic collection on December 31, 1936, contained 15,226 negatives.

The following is a summary of the year's photographic work:

New negatives filed	478
Prints for the album	352
Prints for publication	403
Prints for private use	1068
Prints for Aquarium albums	1353
Enlargements	70
Lantern slides	397

	<i>Species photographed</i>	<i>Number of negatives</i>
Mammals	46	156
Birds	29	53
Reptiles	8	28
Amphibians	2	6
Invertebrates	1	1
—		
	86	
Biological	72	
General	162	
—		
	478	

Photographs of the following animals not hitherto represented in the albums were added during 1936:

MAMMALS:

- Lion marmoset (*Leontocebus rosalia*)
- Pigmy marmoset (*Callithrix pygmaea*)
- Golden cat (*Felis temminckii*)
- Marbled cat (*Felis marmorata*)

- Tayra (*Tayra barbara*)
Mongoose (*Herpestes nyula*)
Saiga antelope (*Saiga tatarica*)
Persian squirrel (*Sciurus persicus*)

BIRDS:

- Golden-headed fruit pigeon (*Sylphitron ornatus gestroi*)
Golden-breasted cotinga (*Euchlornis aureopectus*)
Bare-necked cotinga (*Gymnoderus foetidus*)
White-winged chough (*Corcorax melanorhamphus*)
Paradise calliste (*Tangara paradisea*)
Wattled ibis (*Bostrychia carunculata*)
Silvery-cheeked hornbill (*Bycanistes cristatus*)
Count Salvadori's bird of paradise in display (*Paradisaea apoda salvadorii*)
Sulphur and white-breasted toucan (*Ramphastos vitellinus*)
Red-billed toucan (*Ramphastos monilis*)
Red-billed green toucanet (*Aulacorhynchus sulcatus erythrogaster*)
Maximilian aracari toucan (*Pteroglossus aracari aracari*)
Gould's toucanet (*Selenidera maculirostris gouldii*)

REPTILES:

- Giant river turtle (*Podocnemis dumeriliana*)
Camel-backed turtle (*Amyda steindachneri*)

AMPHIBIANS:

- Tadpole of paradox frog (*Pseudis paradoxus*)

INVERTEBRATES:

- Giant water-bug (*Bolastoma americana*)

Among the miscellaneous activities of the year were the printing of a 28-page catalogue of the Society's publications, replacing a catalogue that was long out of date; publication of an illustrated booklet used in a membership campaign of the Junior Auxiliary of the Society; and the making of more than a thousand photographic prints for the Aquarium, together with assistance in reclassifying and cataloguing the photographic albums of that institution.

Mail sent out by the department during 1936 totalled 22,898 pieces.

NATIONAL MUSEUM OF HEADS AND HORNS

M. S. GARRETSON, *Curator*

In complying with frequent requests for a catalogue of the museum's exhibits, material for a guide book has been assembled and will be published as soon as sufficient funds are available. The catalogue will be instructive and so arranged as to enable anyone seeking a certain specimen to locate it without difficulty or loss of time.

During the past year a number of specimens have been added to the collection, notably a fine head of a wood bison, donated by the Department of Interior, Dominion of Canada. Considerable value and interest is attached to this head because it was taken some years before the transfer of surplus plains bison from the Wainwright herd to the Wood Bison Range. Being of pure blood, unmixed with that of the plains bison, it is a true specimen of *Bison b. athabascae*.

An interesting head, received from the American Museum of Natural History, is that of a Chillingham bull. This ancient breed of wild, white cattle, now about extinct, is said to be of direct prehistoric origin. The animals are less altered from the true primigenus type than any other known breed, and were found on the island of Britain when the Romans first visited it. They were recorded as running wild in the great Caledonian forests. They have never been domesticated and were always classed as game animals, protected and reserved for royal hunting parties.

Two fine heads, one of a white-tail deer and the other of a woodland caribou, *Rangifer c. caribou* from Maine, were donated by Miss Esther Hotchkiss.

Many excellent specimens have been offered, but as few equal or exceed in measurements those on exhibition, only a limited number could be accepted.

Species represented by horns or antlers only do not, as a rule, offer any suggestion as to the appearance of the head they adorned. It is, therefore, the desire of the museum to obtain, in so far as possible, complete heads to represent the various species.

DISTRIBUTION OF SPECIMENS FROM THE ZOOLOGICAL PARK
REPORT OF
THE DEPARTMENT OF COMPARATIVE ANATOMY
AMERICAN MUSEUM OF NATURAL HISTORY

I SUBMIT herewith a report on specimens received from the New York Zoological Society during 1936. The number of specimens totalled 172.

Monthly receipts of material were as follows:

	Specimens		Specimens
January	21	July	29
February	15	August	1
March	10	September	16
April	9	October	14
May	6	November	15
June	23	December	13
<hr/>		<hr/>	
Total	<hr/>		172

These specimens were distributed to the following Museum departments, or otherwise disposed of, as noted:

Department of Herpetology	84
Department of Ornithology	48
Department of Mammalogy	24
Department of Comparative Anatomy	15
Childs Frick, Esq.	1
<hr/>	
	172

WILLIAM K. GREGORY, *Curator.*

REPORT OF
THE PENSION BOARD
TO THE BOARD OF TRUSTEES

DURING 1936 the Pension Board met at the office of Mr. Cornelius R. Agnew, at 82 Beaver Street, under the chairmanship of Mr. W. Redmond Cross. The personnel of the Board for the year was as follows: Mr. W. Redmond Cross, Chairman; Mr. Cornelius R. Agnew, Treasurer; Mr. H. R. Mitchell, Assistant Treasurer; Mr. Lee S. Crandall, Secretary; Dr. W. Reid Blair, Mr. George C. Clark, Dr. Charles H. Townsend, Mr. J. Watson Webb and Mr. Alfred Ely.

Only one active member of the Fund died during the year. This was John Quinn, who died on May 1, after having been keeper of the deer herds in the Zoological Park for more than thirty-six years. There were two deaths of former employees who had been placed on pension. These were Thomas Kelly, aged 77 years, who died on November 25, and Peter Reilly, aged 74, who died on November 8.

There was but one addition to the pension rolls. This was Charles A. Hill, aged 75, who had been employed at the Zoological Park for nearly twenty-three years.

Four resignations during the year, requiring the refund of dues paid, with accrued interest, amounting to \$1,464.29, relieved the Fund of a total accumulated service of thirty-seven years and five months.

Late in 1935 it became evident that, for the first time since the organization of the Pension Fund, in 1914, a deficit would be shown during the following year. Preliminary examination by an actuary suggested the advisability of reorganization of the Plan. This work occupied the Board through most of 1936, the final revision being adopted unanimously at its meeting of December 28, and approved by the Executive Committee on December 29, to be effective January 1, 1937. The principal alterations include a 50% increase in the contributions of members, a substantial increase in the contribution of the Society, general reduction of pension benefits, and elimination of widows' and disability pensions. Pensioners on the rolls January 1, 1937, were not affected, and

members still in service but over age sixty-five will be pensionable under the present rules. However, the elimination of widows' pensions will apply to these groups as well as to all others.

The Pension Board feels that it has now provided the Zoological Society with a Pension Plan that is actuarially sound and that will protect the interests of its employees.

W. REDMOND CROSS, *Chairman*

LEE S. CRANDALL, *Secretary*

REPORT OF THE
DIRECTOR OF THE AQUARIUM

CHARLES M. BREDER, JR.¹
Assistant Director

FOREWORD BY THE DIRECTOR

C. H. TOWNSEND

The Aquarium is a museum that cannot expand in outward dimensions, being confined within the thick walls of a century-old fort.

Its single exhibition hall already contains all the tank equipment for the display of aquatic forms of life that the building can be made to afford. Despite its limited capacity no museum in the city enjoys so large a patronage by the public. Its visitors, always numerous, numbered in 1936 over 2,700,000, or more than 7,000 a day. It is often uncomfortably crowded. The visitor sees only the thousands of living things of hundreds of kinds. He has little understanding of the workings behind the scenes. All water is flowing, except in very small aquaria, but pumps, piping, filters, reservoirs, air compressors, feed rooms, water heaters and coolers, are out of sight—stowed away in basement, attic or back passages, often inconveniently located.

The exhibits come from different regions and climates and must be treated accordingly. There must be warm and cold sea water, warm and cold fresh water and brackish water—all flowing. There are also many small aquaria with water oxygenated by plant life. Many pumps must run continuously.

Fresh water comes from the City supply and sea water (100,000 gallons) from the reservoir to which it is constantly flowing back through filters. Stored sea water has been used thirty years, the pollution of the brackish water of the Harbor having made compulsory the construction of a reservoir underground. Increasing pollution of the Harbor explains also the absence of seals and other marine mammals formerly kept in the large floor pools.

¹ Prepared for the Director, Dr. C. H. Townsend.

It is the task of the management to maintain in restricted quarters the Aquarium's display of living things and the complicated equipment that keeps them alive. The exhibits cannot be expanded, but they are perpetually being changed in character. They require space for movement, the water plentiful, flowing, clean, well-aerated and of proper temperature. These are vital necessities day and night. Mistakes are fatal.

The feeding of the living things in the Aquarium is a matter of ever-present concern. Thousands of specimens of hundreds of kinds, ranging from minnow size to 200 pounds, must be fed with circumspection or losses will follow. There being four or five times as many varieties as there are tanks to contain them, it is necessary to make combinations that have been tested by experience, otherwise the predators will do their deadly work. Most of the natural food of fishes is *other fishes*.

The Aquarium has during recent years been undermanned. Being filled to capacity with living things, the preparation of foods, the care required in feeding and the operation of mechanical equipment for the distribution and temperature of different water systems, require the closest attention on the part of the employees. The general care of the building with its complicated network of piping and control valves is an added and laborious duty. The Aquarium is in need of a larger working force.

THE attendance at the New York Aquarium for 1936 showed a large increase over that of the preceding year and exceeded any since 1910. The total figure was 2,700,720, which represented an increase of 414,580 over 1935. A relatively low point was reached in 1933 (2,123,644), since which year it has been steadily increasing. In the entire history of the institution only two years exceed the present in attendance—those of 1909 and 1910. During the first of these two the Hudson-Fulton celebration caused a great influx of visitors to New York City, which apparently carried over into the first half of the next year. A full tabulation of the attendance at the Aquarium, since it came under the jurisdiction of the Zoological Society, is given in the accompanying table.

Work was continued on a number of improvements both in physical equipment and in the appearance of the visitors' hall, details of which are discussed in the body of the report.

ATTENDANCE AT THE NEW YORK AQUARIUM
1902 (2 months)—1936 inclusive

1902 (Nov. 1-Dec. 31)	151,346
1903	1,547,873
1904	1,625,770
1905	1,726,170
1906	2,106,569
1907	2,131,393
1908	2,536,147
1909	3,803,501
1910	3,003,511
1911	2,011,544
1912	2,144,355
1913	2,205,729
1914	2,029,707
1915	1,538,831
1916	1,499,667
1917	1,595,118
1918	1,450,609
1919	1,850,575
1920	1,994,548
1921	2,376,840
1922	2,121,996
1923	1,813,647
1924	1,795,075
1925	1,703,193
1926	1,722,780
1927	2,129,305
1928	2,469,518
1929	2,436,051
1930	2,523,661
1931	2,453,806
1932	2,190,216
1933	2,123,644
1934	2,178,078
1935	2,286,180
1936	2,700,720
Total	71,977,673

THE LIVING EXHIBITS

	<i>Species</i>	<i>Specimens</i>
Birds	3	12
Reptiles	21	198
Amphibians	8	65
Fishes	381	8,877
Invertebrates	37	872
	450	10,024

The above collection represents an increase of 53 species and 1,172 individual specimens. Nineteen of these species are invertebrates, a special effort having been made to improve this part of the display.

Circulating Salt Water: A collection of Key West fishes was made jointly with the Boston Aquarium in August. Considerable effort was directed toward the collection of a larger number of invertebrate animals than heretofore.

The closed circulating system, formerly in two parts, has been divided into three separate and independent circulating systems, thus providing for more adequate separation. This makes possible more nearly individual treatment for the various requirements of the numerous species exhibited. While the full separation of each aquarium would undoubtedly be ideal from certain standpoints, it would likewise be highly impractical, although some further approach to it would be beneficial.

Probably one of the most striking additions to this collection was several large sea pigeons (Nudibranchs), noted in the *Bulletin* of July-August, 1936.

A group of small tarpon was purchased from the Key West Aquarium and arrived on October 21. They have shown a most satisfactory growth and are in a thriving condition. These are the first tarpon that the Aquarium has been able to acquire that give every promise of living indefinitely.

Circulating Fresh Water (temperate): This collection was improved principally by the addition of an interesting collection of fishes from the State of Massachusetts. We are indebted to the Department of Conservation of that State for permission to collect these fishes. The closed circulation for this system was not yet in proper operation in the period covered by this report.

Floor Pools: Several penguins and large alligators were added to this exhibit.

Standing Fresh Water (tropical): Perhaps the most noteworthy addition to this collection was a series of cavefishes, *Anoptichthys jordani*, totally blind and nearly colorless, of a group hitherto unknown to enter cave waters. The fish, a characin, is apparently close to *Astyanax mexicanus*.

Unusual success was had in displaying the peculiar four-eyed fish, *Anableps*, of two species—*A. anableps* and *A. doweii*.

Fish Hatchery: The following eggs were incubated in the hatchery for exhibition purposes:

Fish eggs donated for the hatchery:

By U. S. Bureau of Fisheries:

40,000 Silver Salmon.

40,000 Lake Trout.

3,000 Rainbow Trout.

By New York State Conservation Department:

74,000 Muskallunge.

30,000 Whitefish.

The following dispositions were made:

To Palisades Interstate Park:

1,000 Silver Salmon fingerlings.

1,000 Rainbow Trout alevins.

To New York City Water Department, for distribution in public waters:

28,000 Silver Salmon alevins.

20,000 Rainbow Trout alevins.

7,000 Lake Trout alevins.

Work of the Collecting Boat: The *Seahorse*, collecting wellboat of the Aquarium, made 9 trips, all to the Sandy Hook Bay region. A total of 935 fishes of 56 species, 813 invertebrates of 12 species and 4 sea turtles of three species, as well as quantities of food objects of various kinds, were collected.

Collections by the Staff: Three one-day trips by truck were made to local lakes and streams for native fresh-water fishes, collecting 5,093 specimens of 12 species, 30 crayfish, and 50 amphibians of one species.

A two-day trip was made to Hadley, Mass., through the courtesy

of the Massachusetts Department of Fish and Game, and 256 specimens of 9 species were collected.

PUBLIC RELATIONS

Attendance: The Aquarium was visited by 2,700,720 persons during the year 1936. The details of the large increase are given in the introduction.

Gifts: Among the notable gifts presented to the Aquarium in 1936 are the following:

Game fishes were received from the Department of Fish and Game, New Hampshire; the United States Bureau of Fisheries and the State of New York Conservation Department.

Dr. David H. Thompson, State Natural History Survey Division, Urbana, Illinois, presented a number of interesting hybrid sunfishes, as well as other mid-west fishes.

Master Charles Votey, Scarsdale, New York, presented a large number of local turtles.

Paramount Aquarium, Inc., presented a collection of kissing gourami.

The sea pigeons referred to elsewhere, together with many items of lesser importance, were brought to us by Mr. J. F. W. Emde, engineer of the S. S. *Volendam*, Holland-America Line.

Valuable electrical apparatus was donated by Mr. Aaron Nadell for work in connection with the investigation of the electrical discharges of certain fishes.

Two complete portable filters were donated by Mr. Karl Dieckmann.

Visitors: During the year the institution had the pleasure of visits from Dr. E. G. Boulenger, director of the Regent's Park Aquarium, London; Dr. D'Arcy Thompson of Dundee University, Scotland, and Dr. Alvin Seale of the Steinhart Aquarium, San Francisco.

Schools: Classes visiting the Aquarium were represented by 26,911 pupils under the care of 1,483 teachers.

Publicity: Formal publicity took mostly the form of press releases from time to time. Five addresses were given by Mr. C. W. Coates of the Aquarium staff.

COOPERATION WITH OTHER INSTITUTIONS

Exchanges: Exchanges were made with the following institutions: Amsterdam Aquarium, The Netherlands.

Gothenberg Aquarium, Sweden.
Regent's Park Aquarium, London, England.
Montreal Aquarium Society, Canada.
Palisades Interstate Park, New York.
Rotterdam Aquarium, The Netherlands.
San Diego Zoo, California.
St. James Reptile Park, Durban, South Africa.

Gifts: Specimens of interest to the institutions were distributed to the following:

American Museum of Natural History, New York City.
Berlin Aquarium, Berlin, Germany.
Bermuda Aquarium, Bermuda.
Oceanographic Institute, Monaco.
Regent's Park Aquarium, London, England.

THE BUILDING AND EQUIPMENT

Mural Paintings: The eighth and ninth paintings, occupying lunette-shaped spaces around the exhibition hall, were hung. These, the work of Charlotte Anna Chase, continue to add to the attractiveness of the hall and we are looking forward to the completion of this great improvement.

Fresh-Water Reservoir: It is necessary to report that the fresh-water reservoir is still not in operation because of unexpected engineering difficulties. As soon as these are overcome it is hoped that this important improvement will be in operation.

Repairs and Replacements: A new sales and information desk was installed. This, a handsome piece of furniture in walnut, is a product of the Works Progress Administration cabinet makers, under the Department of Parks. Its greater attractiveness has been strongly reflected in the sales of literature and novelties.

Extensive skylight repairs were undertaken by Works Progress Administration workers. The central dome in the exhibition hall was repainted, involving a rather extensive scaffolding operation.

Because of changes in the electric supply of lower Manhattan, the current delivered to the Aquarium was changed from direct to alternating current. This necessitated appropriate changes in nearly all of the electrical equipment, including everything from the establishment of new motors for the large pumps, to a new ultraviolet lamp and small laboratory equipment. The cost was borne by the New York Edison Company, and the change was effected with no interruption of service.

FINANCIAL REMARKS

The City of New York appropriated for the year 1936 the sum of \$67,127.00. Of this amount \$55,852.00 was for Personal Service and \$11,275.00 for Other Than Personal Service. On November 30 the City appropriated an additional sum of \$1,685.00 for Other Than Personal Service, making a total for the year of \$68,812.00.

The Works Progress Administration during the year 1936 contributed a considerable sum for labor and materials in connection with the general repair work at the Aquarium, but the figures are not available.

The New York Zoological Society contributed out of private funds the sum of \$17,743.82 for additional salaries to employees, and \$142.63 for additional maintenance. The Society also contributed the sum of \$2,301.87 for living exhibits.

The 1937 city budget calls for the sum of \$67,277.00, of which amount \$55,852.00 is for Personal Service and \$11,425.00 for Other Than Personal Service.

EXTRA-MURAL ACTIVITIES

Galápagos Tortoises: The Florida tortoise colony was visited by Dr. Townsend in March. The animals are in a thriving condition and are showing evidence of reaching maturity.

Home Aquaria Column: The column on tropical aquaria fishes in the New York *Sun* was conducted for the fifth year by Mr. Coates.

A. A. A. S.: The 99th meeting of the American Association for the Advancement of Science, held at Atlantic City, New Jersey, was attended for part of the session by Mr. Breder and Dr. R. F. Nigrelli.

Degree: Mr. Nigrelli received his Ph.D. from New York University. His thesis on the fish parasite, *Oodinium ocellatum*, was published in *Zoologica*, Vol. XXI, (12), October, 1936. The work was based on aquarium material.

WORK OF THE LABORATORY

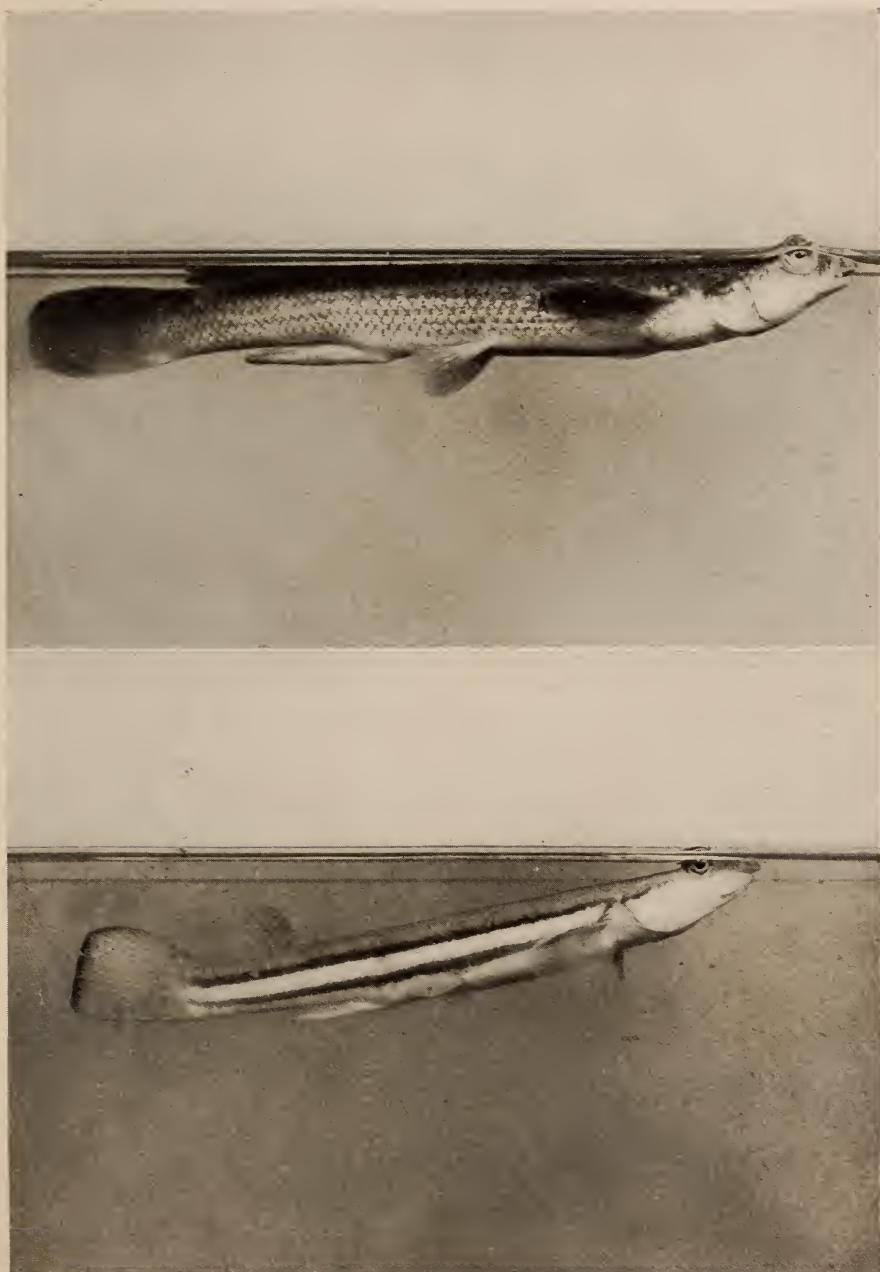
Due to institutional necessity it was impossible to carry forward experimental laboratory work this year. The technical papers listed under "Publications by the Staff" are based on work done at an earlier time and refer to problems mentioned in earlier annual reports. This is not to be interpreted to mean that the laboratory and its equipment found no use. Unusual demands were made on the laboratory quarters because of



A newly discovered cave fish from Mexico, *Anoplotichthys jordani* Hubbs and Innes.



Nassau Groupers, *Epinephelus striatus*, and Killies, *Fundulus heteroclitus*. The latter seemed to delight in playing hide and seek in the open mouth of this well-fed Grouper.



Two species of Four-eyed fish. These are seldom seen in aquaria. Both were on display this year. Upper: *Anableps anableps*. Lower: *Anableps dowezi*.

Florida Sea Anemones of two colors, living side by side in the Aquarium.





Young Tarpon at the Aquarium.



A large Sea Pigeon, a nudibranch, at the Aquarium.



An Archer fish, *Toxotes*. This fish habitually squirts drops of water at insects above the surface, thus knocking them to within reach.



A hibernating aggregation of the Mud Sunfish (*Acantharcus*) in the Aquarium.

the needs of visiting students. Although there was no notable increase in their actual numbers, there was a great increase in the average amount of time that the investigators used Aquarium facilities.

The work of these students was of three chief types: Original problems, work done in cooperation with the staff, and projects suggested by the institution.

Valuable service was rendered by a group of abstractors and translators of the Works Progress Administration. Data on the habits of fishes were thus made available to the staff of the Aquarium that otherwise it would be practically impossible to obtain because of the daily demands on their time by matters requiring immediate attention.

Electrical Phenomenon in Fishes: Studies on the nature of electrical energies discharged by fishes were furthered during the year by Dr. R. T. Cox and Dr. L. P. Granath, Department of Physics, New York University and Dr. D. Brown, Department of Physiology, New York University, with Mr. Coates. The results indicate possibilities of a basic nature in the general study of the electrical nature of nerves and muscles.

Photography: Photographic work was done by Mr. S. C. Dunton and Dr. Nigrelli. Compared with other years the number of negatives made was small, because of other institutional requirements. However, a motion picture film entitled "Aquarium Highlights," in black and white, and a natural color motion picture of fishes in the Aquarium, were made for the Annual Meeting of the New York Zoological Society by Mr. Dunton, under the direction of Mr. Coates.

Visiting Students: The services of the Aquarium were called on to an unusual extent by students drawn from a variety of places, all engaged in biological studies that could be carried on more appropriately at the Aquarium than in other quarters. The following list indicates the nature and variety of their interests:

1. Mr. J. Atz, Cornell University. Reproduction in fishes.
2. Mr. W. R. Bell, New York University. Pituitary of fishes. .
3. Dr. D. Brown, New York University. Physiology of electric eels.
4. Dr. R. T. Cox, New York University. Physical characteristics of electric discharges in electric eels.
5. Dr. H. H. Darby, Columbia University. Hormone studies in fishes.
6. Dr. L. P. Granath, New York University. Physical characteristics of electric discharges in electric eels.

7. Dr. E. B. Gresser, New York University. Anatomy of the fish eye.
8. Dr. H. E. Hopkins, New York University. Tissue respiration in invertebrates.
9. Mr. H. Horner, Upsala College. Maze learning in fishes.
10. Dr. I. M. Korr, New York University. Kidney function in marine fishes.
11. Mr. R. S. Mathews, Columbia University. Anatomy of electric eels.
12. Mr. H. Sears, Yale University. Vertical distribution studies.
13. Dr. G. M. Smith, Yale University. Pathological growths in fishes and turtles.
14. Mr. M. Sobel, New York University. Genetics of *Platypoecilus*.

PUBLICATIONS BY THE STAFF

Scientific results of the second oceanographic expedition of the *Pawnee* 1926. Heterosomata to Pediculati from Panama to Lower California. C. M. Breder, Jr. *Bull. Bingham Oceanographic Coll.*, 2 (3) : 1-56. 19 figs.

The reproductive habits of the North American Sun-fishes (Family Centrarchidae). C. M. Breder, Jr. *Zoologica*, 21 (1) : 1-48. 6 Text figs. 7 Plates.

Tissue Culture and Explantation in Nature: a review of certain experiments and possibilities. C. M. Breder, Jr. *Zoologica*, 21 (10) : 115-124.

The Winter Movements of the Landlocked Alewife, *Pomolobus pseudoharengus* (Wilson). C. M. Breder, Jr. and R. F. Nigrelli. *Zoologica*, 21 (13) : 165-175. 6 Text-figs.

A Southern and Eastern Record of Two Pacific Flying Fishes, *Cypselurus californicus* and *Altipennis*. J. T. Nichols and C. M. Breder, Jr. *Copeia* (3) : 166.

The Morphology, Cytology and Life-history of *Oodinium ocellatum* Brown, a Dinoflagellate Parasite on Marine Fishes. Ross F. Nigrelli. *Zoologica*, 21 (12) : 129-164. 5 Text-figs. 9 Plates.

Some Tropical Fishes as Hosts for the Metacercaria of *Clinostomum complanatum* (Rud. 1814) (= *C. marginatum* Rud. 1819). Ross F. Nigrelli. *Zoologica*, 21 (22) : 251-256. 2 Plates.

Preliminary Note on the Nature of the Electrical Discharges of the Electric Eel, *Electrophorus electricus* (Linnaeus). C. W. Coates and R. T. Cox. *Zoologica*, 21 (11) : 125-128.

Cutaneous melanosis in Lungfishes (Lepidosirenidae). G. M. Smith and C. W. Coates. *Biol. Bulletin*, 71 (2): 282-285.

Neoplastic Diseases in Small Tropical Fishes. G. M. Smith, C. W. Coates and L. C. Strong. *Zoologica*, 21 (18): 219-224.

An investigation of the Presence of Estrogenic Hormones in the Ova and Ovaries of Fish. Abner I. Weisman, Christopher Coates and Rosalind L. Moses. *Endocrinology*, 20 (4): 561-562.

The Female Bitterling as a Biologic Test Animal for Male Hormone. Israel S. Kleiner, Abner I. Weisman, Daniel Mishkind and Christopher W. Coates. *Zoologica*, 21 (21): 241-250.

The Seahorse—Aquarium's Most Popular Fish. C. W. Coates. *The Bee-Hive*, February, 1936.

A Fish That Could Drown. C. W. Coates. *The Bee-Hive*, May, 1936.

Fishes are Finicky. C. W. Coates. *Buick Magazine*, June, 1936.

SALINITY

Record of monthly mean temperatures, specific gravities and alkalinity of the water of New York Harbor at the Battery during the year 1936¹

	Temperature	Hydrogen ion Concentration (pH values)	Specific Gravity
January	43	7.3	1.013
February	38	7.3	1.014
March	41	7.3	1.008
April	46	7.2	1.010
May	56	7.3	1.013
June	68	7.3	1.015
July	68	7.3	1.015
August	70	7.3	1.016
September	71	7.3	1.016
October	65	7.5	1.015
November	61	7.2	1.015
December	48	7.3	1.012

¹ From observations at the New York Aquarium by Mr. T. H. Howley and Dr. Nigrelli. Specific gravity readings corrected to 60°F. pH values read on a La Motte comparator, not corrected for salt error.

ATTENDANCE AT THE NEW YORK AQUARIUM BY MONTHS—1936		
January	Visitors	74,466
February	"	74,550
March	"	152,952
April	"	214,889
May	"	319,560
June	"	298,594
July	"	373,034
August	"	441,674
September	"	293,491
October	"	181,410
November	"	148,622
December	"	127,478

		2,700,720

	Daily Average	2,402
	"	2,570
	"	4,934
	"	7,163
	"	10,312
	"	9,953
	"	12,033
	"	14,248
	"	9,783
	"	5,852
	"	4,954
	"	4,112

		7,399

REPORT OF THE DIRECTOR
DEPARTMENT OF TROPICAL RESEARCH

WILLIAM BEEBE, *Director*

Regular Staff: WILLIAM BEEBE, *Director*; JOHN TEE-VAN, *General Associate*;
GLORIA HOLLISTER, *Research Associate*; JOCELYN CRANE,
Technical Associate; GEORGE SWANSON, *Artist*

DURING 1936 three expeditions, the Twenty-second, Twenty-third and Twenty-fourth of the Department, were undertaken and brought to successful conclusions.

The Twenty-second expedition consisted of a two months' trip through the West Indies from January 22 to March 13, on board the yacht *Hardi Biaou* as guests of Dr. and Mrs. Henry D. Lloyd. During this expedition, on which three members of the staff, Dr. William Beebe, Mr. John Tee-Van and Miss Jocelyn Crane, were engaged, particular attention was paid to the food and color of fishes and especially to those of the West Indian tunas, which were unexpectedly common in a number of places. Observations were recorded on the interesting colony of introduced birds of paradise on the island of Little Tobago, where these birds live completely free and adequately protected by British law. Visits were made to the remnants of virgin jungle still remaining in the island of Trinidad and further studies were embarked upon relating to the demarcation of the faunal line, as applied to fish, between the West Indies and South America, this being, apparently, between Grenada and Tobago. The fish studies were concentrated upon the island of Tobago, and comparisons were made between the land life of the two semi-arid islands of Curaçao, Dutch West Indies, and Margarita, Venezuela. The expedition is reported upon more fully in the Zoological Society's *Bulletin*, Vol. XXXIX, No. 4, 1936, pp. 127-138.

The itinerary of the Twenty-third expedition, inaugurated and led by Miss Hollister, included Trinidad as well as Kaieteur Falls in the interior of British Guiana, South America. Miss Hollister was accompanied by Miss Ruth Walker Brooks, artist, Mr. Arthur vB. Menken, photographer, and, during part of the expedition, by Mr. Arthur Williams, airplane pilot, and Mr. Harry Wendt, co-pilot. Some of the ac-

compliments of this expedition, which lasted from April 2 to May 25, were the recording of observations on the guacharo or oil-bird of Trinidad, the peculiar methods utilized in capturing flying-fish at Barbados, and of the early life of the hoatzin. Motion picture studies were made of the hoatzin and a magnificent series of films was brought back, taken both from the ground and from an airplane, of Kaieteur Fall and the surrounding plateau and jungle, these including views of a number of new and unknown falls. A collection of live birds and animals was brought back to the Zoological Park. The *Bulletin* for September-October, 1936, pp. 166-183, contains an account of this expedition.

The Twenty-fourth expedition, in which members of the Department were guests of Mr. Templeton Crocker on board the yacht *Zaca*, consisted of a trip to the Gulf of California and Clarion Island. Four staff members, Dr. William Beebe, Mr. John Tee-Van, Miss Jocelyn Crane and Mr. George Swanson, accompanied the expedition, which lasted from March 25 to May 25. As the *Zaca* was especially equipped on this trip for deep-sea trawling and dredging, every observation made on board gained in value by being directly comparable to the similar work at Bermuda. As is usual on expeditions of the Department, researches were confined to a few localities and we were thus able to secure ample and fully correlated data on the ecology of a number of typical Lower California marine zones of life. Especially thorough dredgings were made at four places: Cedros Island, Gorda Banks, Arena Bank and the Santa Inez Bay region. Prominent among the studies made during the voyage were those on the food and life of various Pacific tuna, of which we were able to examine hundreds, either caught from the vessel or taken at the cannery at Cape San Lucas. Many notes were also made of food and parasites of swordfish and marlin, besides the observations and camera studies of a dozen or more of the rare whalesharks.

At Clarion Island, 360 miles southwest of the tip of Lower California, six days were spent in an intensive survey of the animal life which will be used for comparison with the similar survey of Bermuda, these two islands being unusually isolated and situated within interesting oceanic currents. Notes were made on the boobies and burrowing owls of Clarion and one of the latter was brought to the Zoological Park where it is still alive. Complete details of the Templeton Crocker *Zaca* expedition were published in the *Bulletin* for November-December, 1936, pp. 232-242.

The laboratory at New Nonsuch was not visited during 1936, but work relating to the Bermuda station has been steadily progressing as is evidenced by the fact that thirteen numbers of *Zoologica* and six other articles relating to Bermuda were published by the staff during the year. Further work on the vast collections of specimens and notes from this locality continues.

During the interval spent at the laboratory in the Zoological Park, the departmental work has consisted of sorting the collections gathered during the year and shipping certain groups of animals to experts for naming, the identification of specimens and compiling of notes on the distribution and life-histories of the fish, crabs and mollusks of the *Zaca* expedition, collating the notes and material of the Guiana expedition, and writing and editing the manuscripts submitted to *Zoologica* and the *Bulletin*. In preparation for the naming of the specimens of the *Zaca* fish collection, nearly three months were spent in cataloguing the literature of the fishes of the tropical and sub-tropical Pacific-American coast. Considerable assistance was given to Mr. P. Lechmere Guppy of Port-of-Spain, Trinidad, in the taxonomic problems involved in the production of a volume on the fishes of Trinidad.

Specimens of fish and crustaceans were lent for study to the Bingham Oceanographic Foundation and to the Museum of Comparative Zoology.

The film of the developing eel egg, taken at the Bermuda laboratory with a stop-motion camera and first shown at the 1936 annual meeting of the Society, was projected before an interested audience at the Atlantic City meeting of the American Association for the Advancement of Science.

The Director was invited to lecture before the Society for the Preservation of the Fauna of the Empire at the Zoological Society of London, and while in England in August was able to assist materially in the coloration of the model of the whaleshark now being prepared in the British Museum. A similar service was rendered to the American Museum of Natural History for the whaleshark recently placed on exhibition at that institution. Thus the notes made on this great fish while on the *Zaca* expedition have been of value to two museums.

Publications: During the year thirty-one publications were issued as a result of the work of the Department of Tropical Research. Three new series, relating to different phases of the continued work of the expeditions, were started, one on plankton studies of the Bermuda Oceano-

graphic Expeditions, one on the reports of the Templeton Crocker expedition and one devoted to studies on the caudal skeleton of fishes. Of the plankton reports seven were issued during 1936, relating to protozoans, polychaetes, copepods, schizopods, bathypelagic nemerteans and siphonophores, together with a general introduction.

A monographic study on the Bermuda deep-sea eels of the family Serrivomeridae was printed, and three papers were prepared dealing with the tuna of the western Atlantic. Particularly interesting studies on the food of one species of tuna demonstrated that these fish descend to surprising depths in the ocean in pursuit of food.

Bulletin articles describing the three expeditions of the year were published in addition to accounts of the development of deep-sea eel eggs and of the larval and later history of the bone-fish.

In an exhaustive paper by M. D. Burkenroad published by the Bingham Oceanographic Foundation and relating to the collections of peneid shrimps of that institution, is the following note ". . . The enormous collection of peneids of the Department of Tropical Research of the New York Zoological Society, made under the direction of Dr. W. Beebe, has yielded information of critical importance that is incorporated in the present paper; the bulk of this material will, however, be considered in a separate study"

Two previously printed volumes of the Director's have been translated in 1936, one into Dutch and the other into German.

CONTRIBUTIONS—1936

- 489—The Egg-life of a Deep-sea Eel. William Beebe.
Bull. N. Y. Zool. Soc., Vol. XXXIX, No. 2, pp. 60-66.
- 490—A Fish Which Grows by Shrinking. Gloria Hollister.
Bull. N. Y. Zool. Soc., Vol. XXXIX, No. 3, pp. 104-109.
- 491—Polychaetous Annelids from the Vicinity of Nonsuch Island, Bermuda. A. L. Treadwell.
Zoologica, Vol. XXI, No. 2, pp. 49-68.
- 492—Bermuda Nature Notes. William Beebe.
Royal Gazette, Hamilton, Bermuda, Jan. 20, 1936.
- 493—The Aristaeinae, Solenocerinae and Pelagic Penaeinae of the Bingham Oceanographic Collection. Martin D. Burkenroad.
Bull. Bingham Oceano. Coll., Vol. 5, Art. 2, pp. 1-151.



The beautiful island of Tobago, near Trinidad, looking across to Little Tobago where many Birds of Paradise (*Paradise apoda*), brought from the Aru Islands, live and breed, under the care of the government. Photo by John Tee-Van.



A Brown Pelican taking off, on a fishing excursion, from his perch in Kingston Harbor, Jamaica. Photo by John Tee-Van.



A natural arch in the great cliffs, known as the Gray Friars, at the very tip of Lower California. Sailfish and other gamefish abound in these waters. Photo by Toshio Asaeda.



Kaieteur Falls, 740 feet in height, in British Guiana, showing the great gorge cut by the waters. The spray sometimes reflects a dozen rainbows at once. Photo by Arthur vB. Mencken.

The rare Rainbow Tanager (*Tangara paradies*) brought back from British Guiana and now living in the collection of the Zoological Park. Photo by Edward Osterendorff.





Masked Booby (*Sula dactylatra*) at its nest on the ground of Clatton Island, far out in the Pacific. Several of the curious, flattened, feather flies can be seen on the plumage. Photo by John Tee-Van.

- 494—Bermuda Oceanographic Expeditions. Individual Nets and Data, 1932-1935. William Beebe.
Zoologica, Vol. XXI, No. 3, pp. 69-73.
- 495—Plankton of the Bermuda Oceanographic Expeditions. I. G. H. Wailes. Introduction by William Beebe.
Zoologica, Vol. XXI, No. 4, pp. 75-80.
- 496—Plankton of the Bermuda Oceanographic Expeditions. II. Notes on Protozoa. G. H. Wailes. *Zoologica*, Vol. XXI, No. 5, pp. 81-84, plates I-II.
- 497—Plankton of the Bermuda Oceanographic Expeditions. III. Notes on Polychaeta. Edith Berkeley.
Zoologica, Vol. XXI, No. 6, pp. 85-87.
- 498—Plankton of the Bermuda Oceanographic Expeditions. IV. Notes on Copepoda. C. B. Wilson.
Zoologica, Vol. XXI, No. 7, pp. 89-93.
- 499—Plankton of the Bermuda Oceanographic Expeditions. V. Notes on Schizopoda. W. M. Tattersall.
Zoologica, Vol. XXI, No. 8, pp. 95-96.
- 500—Plankton of the Bermuda Oceanographic Expeditions. VI. Bathypelagic Nemerteans Taken in the Years 1929, 1930 and 1931. W. R. Coe.
Zoologica, Vol. XXI, No. 9, pp. 97-113, 10 plates.
- 501—Systematic Notes on Bermudian and West Indian Tunas of the genera *Parathunnus* and *Neothunnus*. William Beebe and John Tee-Van.
Zoologica, Vol. XXI, No. 14, pp. 177-194, 7 plates.
- 502—Food of the Bermuda and West Indian Tunas of the Genera *Parathunnus* and *Neothunnus*. William Beebe.
Zoologica, Vol. XXI, No. 15, pp. 195-205, 3 plates.
- 503—Notes on the Biology and Ecology of Giant Tuna, *Thunnus thynnus* Linnaeus, Observed at Portland, Maine. Jocelyn Crane.
Zoologica, Vol. XXI, No. 16, pp. 207-212, 1 plate.
- 504—The Templeton Crocker Expedition. I. Six New Brachyuran Crabs from the Gulf of California. Steve A. Glassell.
Zoologica, Vol. XXI, No. 17, pp. 213-218.

- 505—Deep-sea Fishes of the Bermuda Oceanographic Expeditions. No. 3.
Family Serrivomeridae. William Beebe and Jocelyn Crane.
Zoologica, Vol. XX, No. 3, pp. 53-102.
- 506—Fowling in the Zagros. Jocelyn Crane.
Smith Alumnae Quarterly, February 1936, p. 123.
- 507—The Silvery Bat in Bermuda. William Beebe.
Royal Gazette, Hamilton, Bermuda, June 17, 1936.
- 508—A West Indian Grand Tour. William Beebe.
Bull. N. Y. Zool. Soc., Vol. XXXIX, No. 4, pp. 127-138.
- 509—Ichthyomancy. William Beebe.
Bull. N. Y. Zool. Soc., Vol. XXXIX, No. 4, pp. 138-141.
- 510—Mondfahrt in die Tiefsee, Wilhelm Bölsche.
- 511—The Society's Expedition to Kaieteur Fall. Gloria Hollister.
Bull. N. Y. Zool. Soc., Vol. XXXIX, No. 5, pp. 166-183.
- 512—Storybook Village in Kurdistan. Jocelyn Crane.
Travel Magazine, November, 1936, pp. 14-17, 49-50.
- 513—On the World's Greatest Fishing Grounds. William Beebe.
Bull. N. Y. Zool. Soc., Vol. XXXIX, No. 6, pp. 232-242.
- 514—Plankton of the Bermuda Oceanographic Expeditions. VII. Siphonophora Taken During the Year 1931. Captain A. K. Totton.
Zoologica, Vol. XXI, No. 20, pp. 231-240.
- 515—Caudal Skeleton of Bermuda Shallow Water Fishes. I. Order Isospondyli: Elopidae, Megalopidae, Albulidae, Clupeidae, Dussumieriidae, Engraulidae. Gloria Hollister.
Zoologica, Vol. XXI, No. 23, pp. 257-290.
- 516—Shadrach. Jocelyn Crane.
Nature Magazine, December, 1936, pp. 332-334, 380.
- 517—Zee-Geheimen. William Beebe.
Scheltens and Giltay, Amsterdam, Holland, 1936, pp. 1-252.
- 518—Auf Entdeckungs-fahrt mit Beebe. William Beebe.
F. U. Brockhaus, Leipzig, 1936, pp. 1-207.
- 519—Annual Report of the Director, Department of Tropical Research. William Beebe.
Ann. Rep. N. Y. Zool. Soc., 1935, pp. 57-61.

Treasurer's Reports

FOR THE YEAR ENDING DECEMBER 31, 1936

CORNELIUS R. AGNEW, *Treasurer*
101 Park Avenue, New York City

FINANCES

The financial administration of the Zoological Society is in charge of the Treasurer, the Executive Committee and the Finance Committee.

The Board of Estimate and Apportionment of the City of New York appropriated for the year 1936, \$260,533.92 for Zoological Park maintenance and \$67,127 for the Aquarium. Before the close of the year the Board, upon application of the Society, granted an additional appropriation of \$6,000 to cover increased cost of supplies for the Park and \$1,685 for the Aquarium—making a total appropriation for the Park of \$266,533.92, and for the Aquarium \$68,812.

During the year the Society expended a total of \$203,024.11 from income, contributions and publication funds.

The balance in the Endowment and other Funds of the Society on December 31, 1936, aggregated \$4,052,680.61, of which \$3,905,580.68 was represented by securities carried at cost or gift value with a market value on December 31, 1936, in excess of \$4,000,000.00

The Balance Sheet in the Treasurer's Report is prepared on a cash basis, except as to appropriations made by the City of New York. Animals and other specimens, heads, horns and other property not valued are not included.

The Treasurer calls attention to the fact that in accordance with a resolution adopted by the Executive Committee on December 29, 1936, cash or securities of the General Endowment Account, of a value of \$250,000, is to be set apart as of January 1, 1937, for the use, benefit and purposes of the Pension Fund. Also that on the same date the investments and funds constituting the Auxiliary Pension Fund and the Carnegie Pension Fund Endowment are to be transferred to the Pension Fund.

For the continuation of its work, of great public benefit in the Park and Aquarium, the Society requires the addition of \$2,000,000 to its General Endowment, and desires also the constant attention of its members and friends to the needs of the Library, extension of its scientific and research work, Heads and Horns Collection, Publications and Gallery of Animal Paintings.

Communications or contributions to the Endowment Fund should be addressed either to the Secretary or the Treasurer, at the office of the New York Zoological Society, 101 Park Avenue, New York, N. Y.

A form for gift or bequest is printed on page viii of this Report.

SUMMARY OF EXPENDITURES, 1896 to 1936, NEW YORK ZOOLOGICAL SOCIETY AND THE CITY OF NEW YORK
ON ACCOUNT OF THE DEVELOPMENT AND MAINTENANCE OF THE ZOOLOGICAL PARK AND THE AQUARIUM, INCLUDING THE
PURCHASE OF COLLECTIONS AND ALSO FOR THE SCIENTIFIC AND GENERAL PURPOSES OF THE SOCIETY.

Year	EXPENDED BY THE CITY OF NEW YORK			FROM GATE RECEIPTS		EXPENDED BY THE NEW YORK ZOOLOGICAL SOCIETY										
	Zoological Park Maintenance	Aquarium Maintenance	Bond Issues a/c—Park and Aquarium	Construction and Repairs	Purchase of Animals	Zoological Park Development	Aquarium Improvements	Zoological Park Maintenance	Aquarium Maintenance	Purchase of Animals	Aquarium Specimens	Heads and Horns Collection	Pension Fund Contribution	Library and Paintings	Scientific and General Purposes	
1896	.....	.....	.....	.....	.....	\$ 4,213.63	.....	.....	.....	.....	.....	.....	.....	.....	.....
1897	.....	.....	.....	.....	.....	6,424.61	.....	.....	.....	.....	.....	.....	.....	.....	\$ 2,903.74
1898	.....	.....	.....	.....	.....	23,597.80	.....	.....	.....	.....	.....	.....	.....	.....	4,339.20
1899	\$ 30,000.00	.....	.....	.....	.....	145,495.80	.....	.....	.....	.....	.....	.....	.....	.....	3,476.02
1900	40,000.00	.....	\$ 125,000.00	.....	.....	2,470.88	34,626.24	.....	6,189.33	.....	3,784.32	.....	.....	88.13	5,601.78
1901	65,000.00	.....	300,000.00	.....	.....	2,998.80	18,348.61	.....	3,714.37	.....	11,652.24	.....	.....	462.20	7,597.16
1902	85,000.00	\$ 5,959.97	250,000.00	.....	.....	4,256.50	5,908.69	.....	2,757.57	.....	20,983.07	.....	.....	224.73	11,068.69
1903	104,965.00	46,453.68	280,000.00	.....	.....	5,912.95	1,038.20	.....	.....	.....	20,361.62	.....	.....	456.03	13,608.10
1904	104,965.00	46,439.72	315,000.00	.....	.....	5,421.90	1,013.87	.....	1,894.37	.....	14,299.61	.....	.....	887.16	15,072.84
1905	134,965.00	44,968.50	275,000.00	.....	.....	6,849.00	144.00	.....	.....	.....	20,643.40	.....	.....	418.10	18,773.90
1906	144,965.00	44,987.71	250,000.00	.....	.....	8,132.35	778.48	.....	.....	.....	14,907.36	.....	.....	319.16	17,961.67
1907	141,558.75	44,183.87	100,000.00	.....	.....	8,248.65	370.72	.....	.....	.....	10,606.03	.....	\$ 892.71	644.05	15,999.68
1908	154,627.00	44,157.27	65,000.00	.....	.....	9,446.40	232.27	.....	.....	.....	4,231.61	.....	735.77	1,313.87	14,693.92
1909	162,325.00	45,971.44	10,000.00	.....	.....	9,992.75	2,860.92	.....	.....	.....	9,734.43	.....	7,340.82	609.56	17,168.95
1910	167,632.00	45,974.86	89,500.00	.....	.....	9,909.90	5,918.35	.....	.....	.....	4,339.25	\$ 973.90	2,036.39	1,021.87	20,627.77
1911	174,632.00	47,560.21	155,000.00	.....	.....	11,611.15	1,155.00	.....	.....	.....	6,659.89	1,191.80	1,615.38	1,221.26	23,409.39
1912	182,365.00	46,597.08	.....	.....	.....	11,838.40	40.00	.....	.....	.....	22,750.18	1,350.03	556.94	1,031.55	32,109.01
1913	191,925.00	47,335.62	29,100.00	.....	.....	12,404.25	218.45	.....	.....	.....	10,665.57	1,850.25	486.00	732.97	32,543.88
1914	200,000.00	46,995.53	.....	.....	\$ 9,237.81	3,831.15	2,175.13	.....	.....	22,590.44	1,792.99	338.73	\$ 3,333.33	3,541.15	28,246.42
1915	200,000.00	46,991.66	21,425.00	9,175.86	887.88	13,629.41	1,466.64	1,024.91	8,000.00	4,181.24	31,398.08
1916	197,074.35	46,996.43	9,599.81	425.30	13,511.12	2,193.57	1,031.47	8,000.00	1,555.12	38,339.99
1917	199,560.00	46,903.61	3,488.31	7,118.90	1,450.05	11,537.79	10,175.70	1,637.15	18.12	8,000.00	2,869.20	44,262.48
1918	207,586.00	48,630.71	2,642.70	48.12	1,580.00	\$ 93.61	8,425.92	960.19	18.61	8,000.00	3,559.85	34,125.49
1919	190,000.00	45,000.00	5,000.00	4,917.84	\$ 3,450.00	19,924.00	407.07	13,345.59	1,028.05	88.27	8,000.00	1,442.07	45,599.71
1920	250,098.27	53,971.48	15,000.00	17,438.28	.....	5,007.00	4,095.03	5,141.92	.....	32,761.08	1,654.02	263.86	8,000.00	2,517.64	51,018.20
1921	276,951.01	65,203.12	86,000.00	25,463.77	.....	88,734.92	53,635.02	6,068.17	976.47	27,442.59	2,165.05	2,661.67	8,000.00	4,698.24	55,684.15
1922	264,618.05	63,341.26	25,000.00	17,060.00	.....	50,888.65	16,153.03	10,074.88	3,326.28	43,047.41	3,057.91	7,191.93	8,000.00	1,765.78	58,797.69
1923	262,724.50	57,166.63	.....	18,388.20	.....	5,000.00	.....	19,019.09	3,319.44	24,456.20	1,432.89	1,550.69	8,000.00	3,391.96	58,404.21
1924	262,471.01	57,319.20	7,970.00	16,806.00	.....	.....	32,272.21	28,956.34	8,097.14	11,560.62	2,013.88	942.34	8,000.00	1,938.77	76,559.41
1925	262,808.69	58,324.89	85,000.00	19,974.05	.....	.....	.....	38,793.01	4,380.45	20,843.01	2,609.55	667.78	8,000.00	1,174.24	242,753.89
1926	273,815.12	62,266.20	1,500.00	20,102.90	.....	.....	.....	45,467.10	7,261.21	23,460.04	2,847.35	306.32	8,000.00	562.40	87,915.27
1927	276,855.19	65,216.89	.....	18,960.48	.....	.....	1,395.00	61,968.22	11,656.97	27,545.92	2,861.55	135.00	8,000.00	2,477.37	82,807.54
1928	319,380.50	88,109.12	.....	18,106.25	.....	2,480.06	.....	52,676.35	10,776.84	21,001.88	2,912.97	107.89	8,000.00	1,168.15	88,794.37
1929	338,359.00	71,229.35	100,000.00	21,957.80	.....	13,095.54	984.85	59,673.38	13,670.81	23,783.69	3,572.14	669.48	8,000.00	4,029.63	122,774.78
1930	350,170.92	81,343.46	50,000.00	20,834.91	.....	2,500.89	375.00	65,600.39	16,966.30	17,492.92	1,355.56	639.04	10,000.00	2,726.37	134,278.88
1931	349,344.95	76,408.08	.....	14,890.58	.....	5,131.68	.....	65,601.03	19,541.40	24,439.56	3,650.58	1,707.40	10,000.00	6,713.26	128,871.12
1932	337,490.01	76,071.24	.....	16,710.25	.....	1,852.40	.....	61,127.48	19,155.01	20,039.28	1,934.84	335.00	10,000.00	3,607.97	97,303.32
1933	268,633.38	67,814.24	5,422.63	13,961.02	.....	.....	.....	62,996.66	18,120.73	7,644.14	2,199.91	118.65	10,000.00	3,384.38	86,757.06
1934	257,423.08	65,806.61	.....	11,025.88	.....	1,037.19	.....	66,502.59	18,229.23	9,267.86	1,641.06	162.86	10,000.00	606.53	81,711.26
1935	265,630.94	68,203.46	.....	11,596.51	.....	.....	.....	60,237.94	18,832.57	16,530.28	2,031.56	275.21	10,000.00	383.07	82,929.14
1936	265,057.37	68,760.95	.....	13,496.42	.....	100.00	.....	57,270.94	17,886.45	20,918.46	2,867.50	178.43	10,000.00	470.18	79,835.73

Add premium on Bonds, less
Balances reverting to the City 3

CLASSIFIED SUMMARY OF EXPENDITURES FOR THE YEAR 1936, NEW YORK ZOOLOGICAL SOCIETY

	PARK MAINTENANCE		AQUARIUM MAINTENANCE		NEW YORK ZOOLOGICAL SOCIETY FUNDS						GRAND TOTAL	
	From City Funds		From City Funds		Special Funds		General Income Fund		Scientific & Research			
	Salaries	Other Items	Salaries	Other Items	Salaries	Other Items	Salaries	Other Items	Salaries	Other Items	Salaries	Other Items
Zoological Park: Maintenance by City												
Administration.....	\$29,324.15	.....										\$29,324.15
Care of Buildings and Collections.....	94,193.26	.....										94,193.26
Care of Grounds.....	80,069.96	.....										80,069.96
Supplies.....		\$46,355.00										\$46,355.00
Equipment.....		1,235.00										1,235.00
Materials.....		7,280.00										7,280.00
Miscellaneous.....		6,600.00										6,600.00
Gate Receipts												
Improvements and Repairs					\$13,596.42	.....						13,596.42
Contributions by Society												
Maintnance.....							\$52,635.97	\$4,634.97				52,635.97
Administration.....							14,700.00	6,308.23				14,700.00
Purchasc of Animals.....							\$20,918.46	.....				20,918.46
Oil Paintings.....							245.90	.....				245.90
Membership Expenses.....							3,545.75	4,427.01				3,545.75
Educational Activities.....							3,999.84	953.99				3,999.84
Conservation Activities							150.00	717.23				867.23
Insurance.....							6,499.37	2,606.81				2,606.81
Pension Contributions.....							519.96	1,837.65				15,398.55
Miscellaneous Expenditures.....							55.55	.....				519.96
Scientific Purposcs.....							.....	.....				1,837.65
Heads and Horns Collection.....							.....	.....				15,975.00
Aquarium: Maintenance by City												
Contributions by Society												
Maintenance.....			\$55,819.56	\$12,941.39								55,819.56
Insurance.....												142.63
Aquarium Specimcns.....												505.68
Misccllanous Expnditres.....												2,867.50
Totals.....	\$203,587.37	\$61,470.00	\$55,819.56	\$12,941.39	\$22,495.60	\$21,935.54	\$99,644.71	\$24,778.86	\$18,071.52	\$16,097.88	\$399,618.76	\$137,223.67
Totals by Funds.....	\$265,057.37		\$68,760.95		\$44,431.14		\$124,423.57		\$34,169.40		\$536,842.43	

STATEMENT OF FUNDS PROVIDED BY THE VARIOUS CITY ADMINISTRATIONS FOR THE DEVELOPMENT
AND MAINTENANCE OF THE ZOOLOGICAL PARK AND AQUARIUM
FROM THE ORGANIZATION OF THE SOCIETY TO THE PRESENT
1896 to 1937

MAYOR	COMPTROLLER	Year	MAINTENANCE		CORPORATE STOCK ISSUES	
			Park	Aquarium	Park	Aquarium
Robert A. Van Wyck 1898-1901	Bird S. Coler 1898-1901	1899	\$30,000.00	.....	.....	.....
		1900	40,000.00	.....	\$125,000.00	.....
		1901	65,000.00	.....	300,000.00	.....
		1902	85,000.00	\$ 5,959.97	250,000.00	.....
Seth Low 1902-1903	E. M. Grout 1902-1903	1903	104,965.00	46,453.68	250,000.00	\$30,000.00
		1904	104,965.00	46,439.72	275,000.00	40,000.00
G. B. McClellan 1904-1909	E. M. Grout 1904-1906 Herman A. Metz 1907-1909	1905	134,965.00	44,968.50	275,000.00	.....
		1906	144,965.00	44,987.71	250,000.00	.....
		1907	141,558.75	44,183.87	100,000.00	.....
		1908	154,627.00	44,157.27	65,000.00	.....
		1909	162,325.00	45,971.44	10,000.00	.....
		1910	167,632.00	45,974.86	89,500.00	.....
		1911	174,632.00	47,560.21	155,000.00	.....
W. J. Gaynor 1910-1913	W. A. Prendergast 1910-1913	1912	182,365.00	46,597.08	.....	.....
Ardolph L. Kline 1913		1913	191,925.00	47,335.62	.....	29,100.00
J. P. Mitchell 1914-1917		1914	200,000.00	46,995.53	.....	.....
J. F. Hylan 1918 to 1925		1915	200,000.00	46,991.66	21,425.00	.....
		1916	197,074.35	46,996.43	.....	.....
		1917	199,560.00	46,903.61	.....	.....
		1918	207,586.00	48,630.71	.....	.....
James J. Walker 1926 to 1932	C. L. Craig 1918 to 1925	1919	190,000.00	45,000.00	5,000.00	.....
		1920	250,098.27	53,971.48	15,000.00	.....
		1921	276,951.01	65,203.12	.....	86,000.00
		1922	264,618.05	63,341.26	.....	25,000.00
		1923	264,515.00	59,226.00	.....	.....
		1924	264,514.49	58,309.00	.....	7,970.00
		1925	264,514.49	58,334.00	52,000.00	33,000.00
		1926	274,280.00	62,348.00	.....	1,500.00
John P. O'Brien 1933	Charles W. Berry 1926 to 1933	1927	277,280.00	65,228.00	.....	.....
		1928	319,380.50	88,111.00	.....	65,000.00
		1929	338,359.00	71,232.00	†35,000.00	.....
		1930	350,170.92	81,354.79	50,000.00	.....
		1931	349,459.00	76,167.00	.....	.....
		1932	342,759.00	76,132.00	.....	.....
		1933	271,213.00	69,528.00	.....	.....
		1934	*260,377.88	*67,459.81	.....	.....
Fiorello H. LaGuardia 1934	W. Arthur Cunningham 1934 Joseph D. McGoldrick 1934 Frank J. Taylor 1935	1935	*266,983.92	*68,212.34	.....	.....
		1936	*266,533.92	*68,812.00	.....	.....
		1937	259,338.92	67,277.00	.....	.....
		Totals	\$8,240,492.47	\$2,012,354.67	\$2,322,925.00	\$317,570.00

Note: The appropriations for each year are granted by the Board of Estimate the previous year.

*As modified.

† Appropriated for New Public Comfort Station but later rescinded.

BALANCE SHEET

As at December 31, 1936

ASSETS	
Cash: At The National City Bank, City Bank Farmers Branch On Hand	\$ 117,818.74 100.00
Accounts Receivable: Due from the City of New York on account of: 1936 Park Maintenance Appropriation	117,918.74 \$29,191.49
1936 Aquarium Maintenance Appropriation	8,159.06 <hr/>
Investments—Stocks, Bonds, Etc. (at cost or bequest value)	3,905,580.68 <hr/> \$4,060,849.97
LIABILITIES AND FUNDS	
Accounts Payable: For Park Maintenance	\$ 6,909.81
For Aquarium Maintenance	<hr/> 1,259.55
Funds as at December 31, 1936:	8,169.36
<i>Endowment Funds:</i>	
General Endowment	\$ 711,635.49*
Anna M. Harkness Endowment	1,059,078.94
Rockefeller Endowment	994,745.83
Sage Endowment	704,422.84
George F. Baker Endowment	102,600.25
Jacob H. Schiff Endowment	102,298.75
Ladies' Auxiliary Endowment	<hr/> 5,680.00
<i>Special Endowment Funds:</i>	3,680,462.10
Cadwalader Animal Endowment	\$ 24,033.79
William E. Damon Endowment	10,094.83
Florence Lydig Sturgis Endowment	17,177.43
Stokes Bird Endowment	6,015.00
Carnegie Pension Endowment	<hr/> 100,958.21* 158,279.26
<i>Special Funds:</i>	
Animal Account	48,184.23
Art Gallery Account	4,749.54
Improvement and Repair Account	4,018.39
Biological Laboratory Construction Account	24,481.67
Auxiliary Pension Account	<hr/> 62,386.74*
Revolving Publication Account	<hr/> 3,604.47 147,425.04
General Income Fund	54,912.45
<i>Scientific and Research Funds:</i>	
Publication Account	8,289.65
Expedition Account	9.09
Library Account	1,517.75
Heads and Horns Collection Account	<hr/> 1,785.27 11,601.76
	<hr/> 4,052,680.61

* By resolution of the Executive Committee, \$250,000 in cash or securities are set apart as of January 1, 1937, from the General Endowment Fund for the benefit and purposes of the Pension Fund. As of the same date, the Auxiliary Pension Account and Carnegie Pension Endowment Account are transferred to the Pension Fund.

\$4,060,849.97

GROUP I

Maintenance Fund
ZOOLOGICAL PARK ACCOUNT

INCOME

Received from the City of New York on account of Park Maintenance for the year 1936	\$235,865.88
Budget Appropriation	\$260,533.92
Workmen's Compensation Insurance collected by City of New York and credited to Personal Service, Maintenance Appropriation for 1936	34.62
Supplemental Appropriation	
For Forage & Veterinary Supplies	\$5,250.00
For General Plant Materials	750.00
	6,000.00
	<u>\$266,568.54</u>

Due from the City of New York on account of Park Maintenance.....	29,191.49
Balances reverting to the City of New York	1,511.17
Personal Service	
	<u>\$266,568.54</u>
Deficit in City Maintenance Appropriation for 1936 (Paid by the New York Zoological Society)	57,270.94
	<u>\$323,839.48</u>

EXPENDITURES

<i>Personal Service:</i>	
General Administration	\$ 29,324.15
Maintenance and Care of Buildings and Collections	94,193.26
Maintenance and Care of Grounds	80,069.96
Salaries in Excess of City Appropriation	52,635.97
	<u>\$256,223.34</u>

<i>Supplies:</i>	
Food for Animals	\$ 31,608.43
Fuel	5,903.67
Fuel Oil	7,163.23
Office Supplies	509.32
Stationery and Printing	646.62
Drugs and Medicines	105.08
Medical and Surgical Supplies	69.92
Disinfectants	87.55
Janitors' Supplies	138.34
Motor Vehicle Supplies	500.00
Nursery Stock and Seeds	47.43
Nursery Supplies	164.83
Miscellaneous Supplies	1,039.11
	<u>47,983.53</u>

<i>Equipment:</i>	
Uniforms and Wearing Apparel	\$ 275.69
Office Equipment	88.06
Motor Vehicle Equipment	135.00
Janitors' Equipment	144.89
Painters' Equipment	186.59
Rubber Hose	120.48
Tools and Machinery	109.24
Miscellaneous Equipment	461.80
	<u>1,521.75</u>

Materials:

Motor Vehicle Materials	\$ 237.36
Bolts, Nails and Hardware	270.69
Electrical Materials	128.20
Fencing and Netting	406.39
Furnace Materials	536.37
Glaziers' Materials	406.11
Lumber	1,565.20
Paints and Oils	965.91
Plumbing Materials	956.55
Sand, Cement and Brick	523.52
Steel and Iron	985.09
Miscellaneous Materials	435.41
	7,416.80

Contract or Open Order Service:

Apparatus and Machinery Repairs	\$ 443.35
Plumbing Repairs	2,267.20
Sanitary Service	18.00
Miscellaneous Repairs	278.95
Motor Vehicle Repairs	123.15
Electric Service	3,856.14
Gas	91.20
Telephone Service	1,762.28
Expressage and Deliveries	59.27
	8,899.54

Contingencies:

Medical Attendance, Animals	\$ 41.00
Miscellaneous Expenses	242.35
	283.35
Balances reverting to the City of New York	\$322,328.31
	1,511.17
	<u>\$323,839.48</u>

GROUP I

Maintenance Fund
AQUARIUM ACCOUNT

INCOME

Received from the City of New York on account Aquarium Maintenance Appropriation for the year 1936	\$ 60,601.89
Budget Appropriation	\$ 67,127.00
Supplemental Appropriation	1,685.00
	<hr/>
	\$ 68,812.00

Due from City on account of Aquarium Maintenance Appropriation	8,159.06
Unexpended balance reverting to City	51.05
	<hr/>
Deficit in City Maintenance Appropriation for 1936 (Paid by the New York Zoological Society)	\$ 68,812.00
	<hr/>
	17,886.45
	<hr/>
	\$ 86,698.45

EXPENDITURES

Salaries and Wages	\$ 55,819.56
Salaries in excess of City Appropriation	17,743.82
Forage and Veterinary Supplies	2,900.00
Fuel Supplies	4,046.83
Office Supplies	275.00
Laundry, Cleaning and Disinfecting Supplies	199.14
Refrigerating Supplies	200.00
General Plant Supplies	700.00
Wearing Apparel	140.25
Office Equipment	125.00
General Plant Equipment	900.00
General Plant Materials	1,150.00
Repairs and Replacements	1,650.00
Telephone Service	409.22
Expressage and Cartage	238.58
Contingencies	150.00
	<hr/>
Unexpended balance reverting to City	\$ 86,647.40
	51.05
	<hr/>
	\$ 86,698.45

M. C. FENSTEMAKER, *Secretary*

GROUP II

Endowment Fund

GENERAL ENDOWMENT ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$ 683,710.91
Balance	2,933.77

RECEIPTS	
Estate of Edwin Thorne	\$ 5,000.00
Edith H. deLong	1,000.00
Life Memberships	300.00
Profit on Sale and Redemption of Securities.....	18,690.81
	24,990.81
	<hr/>
	\$ 711,635.49

Funds as of December 31, 1936*:

Investments at cost	\$ 709,779.04
Balance	1,856.45

ANNA M. HARKNESS ENDOWMENT ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$ 1,043,789.18
Balance	251.88

RECEIPTS	
Profit on Sale and Redemption of Securities.....	\$ 15,037.88

Funds as of December 31, 1936:

Investments at cost	\$ 1,034,333.84
Balance	24,745.10

ROCKEFELLER ENDOWMENT ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$ 948,583.15
Balance	2,844.16

RECEIPTS	
Profit on Sale of Securities.....	43,318.52

Funds as of December 31, 1936:

Investments at cost	\$ 993,545.96
Balance	1,199.87

* See note, page 61.

GROUP II

Endowment Fund

SAGE ENDOWMENT ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$691,694.38
Balance	4,549.39

RECEIPTS

Profit on Sale and Redemption of Securities	\$ 8,179.07
	<u>\$704,422.84</u>

Funds as of December 31, 1936:

Investments at cost	\$703,476.63
Balance	946.21

GEORGE F. BAKER ENDOWMENT ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$101,997.50
Balance	602.75

Funds as of December 31, 1936:

Investments at cost	\$101,997.50
Balance	602.75

JACOB H. SCHIFF ENDOWMENT ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$ 99,085.00
Balance	915.00

RECEIPTS

Profit on Redemption of Bonds	\$ 2,298.75
	<u>\$102,298.75</u>

Funds as of December 31, 1936:

Investments at cost	\$101,201.25
Balance	1,097.50

\$102,298.75

\$102,298.75

\$102,298.75

LADIES' AUXILIARY ENDOWMENT ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$ 5,000.00
Balance	680.00

\$ 5,680.00

Funds as of December 31, 1936:

Investments at cost	\$ 5,000.00
Balance	680.00

\$ 5,680.00

GROUP III

Special Endowment Fund

CADWALADER ANIMAL ENDOWMENT ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$ 20,000.00	
Balance	3,033.79	\$ 23,033.79

RECEIPTS		
Interest on Investment		\$ 1,000.00
		<u>\$ 24,033.79</u>
Funds as of December 31, 1936:		
Investments at cost	\$ 20,000.00	
Balance	4,033.79	\$ 24,033.79
		<u>\$ 24,033.79</u>

WILLIAM E. DAMON ENDOWMENT ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$ 9,705.00	
Balance	440.46	\$ 10,145.46

RECEIPTS		
Interest on Investments	\$ 500.00	
Aquarium Specimens	15.00	\$ 515.00
		<u>\$ 10,660.46</u>
EXPENDITURES		
Aquarium Specimens		\$ 565.63
Funds as of December 31, 1936:		
Investments at cost	\$ 9,705.00	
Balance	389.83	\$ 10,094.83
		<u>\$ 10,660.46</u>

FLORENCE LYDIG STURGIS ENDOWMENT ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$ 15,068.75	
Balance	1,333.68	\$ 16,402.43

RECEIPTS		
Interest on Investments	\$ 775.00	
		<u>\$ 17,177.43</u>
Funds as of December 31, 1936:		
Investments at cost	\$ 15,068.75	
Balance	2,108.68	\$ 17,177.43
		<u>\$ 17,177.43</u>

GROUP III

Special Endowment Fund

STOKES BIRD ENDOWMENT ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$ 5,056.46
Balance	<u>908.54</u> \$ 5,965.00

RECEIPTS

Interest on Investments	200.00
	<u>\$ 6,165.00</u>

EXPENDITURES

Preservation of Bird Life	\$ 150.00
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Funds as of December 31, 1936:

Investments at cost	\$ 5,056.46
Balance	<u>958.54</u> \$ 6,015.00
	<u>\$ 6,165.00</u>

CARNEGIE PENSION ENDOWMENT ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$100,066.25
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RECEIPTS

Profit on Sale of Bonds	891.96
	<u>\$100,958.21</u>

Funds as of December 31, 1936:

Investments at cost	\$100,433.75
Balance	<u>524.46</u> \$100,958.21
	<u>\$100,958.21</u>

GROUP IV

Special Fund
ANIMAL ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$ 22,597.50
Balance	28,655.60

RECEIPTS	
Privilege Department	\$ 16,000.00
Childs Frick	200.00
Income from Investments	1,094.00
Sale of Animals	473.35
Checking	10.60
Miscellaneous	71.64
	<hr/>
	\$ 17,849.59
	<hr/>
	\$ 69,102.69

Purchase of Animals:

Mammals	\$ 13,311.32
Birds	4,212.47
Reptiles	2,473.80

Express and Other Charges	\$ 787.37
Traveling and Other Expenses	133.50

Funds as of December 31, 1936:

Investments at cost	\$ 22,597.50
Balance	25,586.73

\$ 69,102.69

ART GALLERY ACCOUNT

Balance as of December 31, 1935	\$ 4,995.44
	<hr/>
	\$ 4,995.44

EXPENDITURES	
Oil Paintings	\$ 200.00
Miscellaneous Expenses	45.90

Balance as of December 31, 1936	\$ 4,749.54
	<hr/>
	\$ 4,995.44

REVOLVING PUBLICATION ACCOUNT

Balance as of December 31, 1935	\$ 3,614.02
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RECEIPTS	
Sale of "Present Day Mammals"	\$ 46.00

EXPENDITURES	
"Present Day Mammals"	\$ 5.55
"American Bison"	50.00

Balance as of December 31, 1936	\$ 3,604.47
	<hr/>
	\$ 3,660.02

GROUP IV

Special Fund**IMPROVEMENT AND REPAIR ACCOUNT**

Balance as of December 31, 1935.....	\$ 5,959.71
	RECEIPTS
Gate Receipts	\$ 11,555.10
Louis J. Boury	100.00
	<u>\$ 11,655.10</u>
	<u>\$ 17,614.81</u>
	EXPENDITURES
Boilers	\$ 301.44
Cages	1,372.40
Concrete Work	2,910.60
Fences	729.35
Gardening	1,188.00
Guard Wires	1,794.10
Reptile House Floor	1,881.75
Reptile House Railing	904.60
Walks	138.60
Miscellaneous Repairs	2,375.58
Balance as of December 31, 1936.....	\$ 13,596.42
	\$ 4,018.39
	<u>\$ 17,614.81</u>

BIOLOGICAL LABORATORY CONSTRUCTION ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$ 19,925.00
Balance	2,470.06
	<u>\$ 22,395.06</u>
	RECEIPTS
Income from Investments	\$ 992.86
Profit on Sale of Bonds	1,093.75
	<u>\$ 2,086.61</u>
	<u>\$ 24,481.67</u>
Funds as of December 31, 1936:	
Investments at cost	\$ 23,715.00
Balance	766.67
	<u>\$ 24,481.67</u>
	<u>\$ 24,481.67</u>

AUXILIARY PENSION ACCOUNT

Funds as of December 31, 1935:

Investments at cost	\$ 60,260.00
Balance	858.24
	<u>\$ 61,118.24</u>
	RECEIPTS
General Income Fund (transfer)	\$ 3,000.00
Income from Investments	3,569.17
Profit on Sale of Bonds	97.88
	<u>\$ 6,667.05</u>
	<u>\$ 67,785.29</u>
	EXPENDITURES
Auxiliary Pensions	\$ 5,398.55
Funds as of December 31, 1936:	
Investments at cost	\$ 59,670.00
Balance	2,716.74
	<u>\$ 62,386.74</u>
	<u>\$ 67,785.29</u>

GROUP V

General Income Fund

Balance as of December 31, 1935..... \$ 33,790.99

RECEIPTS	
Income from General Endowment.....	\$ 33,843.85
Income from Harkness Endowment.....	40,271.46
Income from Rockefeller Endowment.....	42,579.96*
Income from Sage Endowment.....	39,092.16
Income from Baker Endowment.....	2,590.00
Income from Schiff Endowment.....	5,627.50
Income from Ladies' Auxiliary Endowment.....	200.00
	\$164,204.93
Annual Dues	\$ 9,940.00
Sustaining Membership Dues	40.00
	\$ 9,980.00
American Museum of Natural History.....	\$ 200.00
Ladies' Auxiliary for Reception Expenses.....	125.00
Annual Report (Sales)	35.10
	\$ 360.10
	<u>\$208,336.02</u>

EXPENDITURES

General Office Expenses	\$ 4,218.21
Stationery, Printing & Office Supplies	2,090.02
Salary of Chairman	7,000.00
Salary of Secretary	2,500.00
Treasurer's Office Expenses	3,700.00
Audit of Accounts	1,500.00
Annual Reports	5,680.00
Annual Meeting	1,205.71
Reception Expenses	1,087.05
	\$ 28,980.99
Educational Activities	\$ 4,953.83
Conservation Activities	717.23
	\$ 5,671.06
Insurance, Zoological Park	\$ 2,606.81
Insurance, Aquarium	505.68
	\$ 3,112.49
Aquarium Specimens	\$ 2,301.87
Aquarium Expenses	342.79
	\$ 2,644.66
Pension Fund Income Account	\$ 6,499.37
Aid to Employees	450.00
	\$ 6,949.37
Miscellaneous Expenses	\$ 1,907.61
Zoological Park on account of Maintenance Salaries.....	\$ 52,635.97
Zoological Park Maintenance Supply Deficit.....	4,634.97
Aquarium on account of Maintenance Salaries.....	17,743.82
Aquarium Maintenance Supply Deficit	142.63
Auxiliary Pension Account	3,000.00
Publication Account	17,000.00
Tropical Research Account	9,000.00
	\$104,157.39
Balance as of December 31, 1936	\$ 54,912.45
	<u>\$208,336.02</u>

Note: *Less Accrued Interest Purchased—\$1,361.04, not due or collected.

GROUP VI

Scientific and Research Fund

PUBLICATION ACCOUNT

Balance as of December 31, 1935.....	\$ 8,348.90
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RECEIPTS	
General Income Fund (Transfer)	\$ 17,000.00
Gloria Hollister	143.01
Sale of Bulletin	528.49
Sale of Zoologica	249.42
Sale of Zoopathologica	5.00
Sale of "Serpents of the Northeastern States".....	500.36
Sale of "Our Vanishing Wild Life".....	3.00
Sale of "Tropical Wild Life in British Guiana".....	8.00
Sale of Photographs and Slides.....	598.92
	<u>\$ 19,036.20</u>
	<u>\$ 27,385.10</u>

EXPENDITURES	
Bulletin	\$ 10,641.63
Zoologica	3,935.59
Zoopathologica	205.81
"Serpents of the Northeastern States".....	145.98
Photographs and Slides.....	4,166.44
	<u>\$ 19,095.45</u>
Balance as of December 31, 1936	<u>\$ 8,289.65</u>
	<u>\$ 27,385.10</u>

TROPICAL RESEARCH ACCOUNT

RECEIPTS	
General Income Fund (Transfer)	\$ 9,000.00
EXPENDITURES	
Salaries	\$ 9,000.00
<u><u></u></u>	

1936 EXPEDITION ACCOUNT

Balance as of December 31, 1935.....	\$ 9.09
RECEIPTS	
William Beebe	\$ 4,923.04
Templeton Crocker	748.20
	<u>\$ 5,671.24</u>
	<u>\$ 5,680.33</u>
EXPENDITURES	
Salaries	\$ 1,800.00
Laboratory Expenses	944.15
22nd Expedition to the West Indies.....	459.87
24th Expedition to Lower California	2,467.22
	<u>\$ 5,671.24</u>
Balance as of December 31, 1936.....	<u>\$ 9.09</u>
	<u>\$ 5,680.33</u>

GROUP VI

Scientific and Research Fund
LIBRARY ACCOUNT

Balance as of December 31, 1935.....	\$ 1,742.03
	<u>\$ 1,742.03</u>
EXPENDITURES	
Books, Pamphlets, etc.	\$ 42.92
Subscription to Periodicals	175.04
Miscellaneous Expenses	6.32
	<u>\$ 224.28</u>
Balance as of December 31, 1936	\$ 1,517.75
	<u>\$ 1,742.03</u>

HEADS AND HORNS COLLECTION ACCOUNT

Balance as of December 31, 1935.....	\$ 1,963.70
	<u>\$ 1,963.70</u>
EXPENDITURES	
Miscellaneous Expenses	\$ 178.43
Balance as of December 31, 1936	\$ 1,785.27
	<u>\$ 1,963.70</u>

H. R. MITCHELL, *Manager*
December 31, 1936.

CORNELIUS R. AGNEW, *Treasurer*

Pension Fund Income Account

Uninvested balance as of December 31, 1935:

At the City Bank Farmers Trust Co.....	\$ 7,930.20	
At Corn Exchange Bank Trust Co.....	2,289.35	\$ 10,219.55
Investments at Cost		<u>\$167,607.06</u>
		<u>\$177,826.61</u>

RECEIPTS

Dividends from Stock Investments	\$ 4,835.97	
Interest on Bond Investments	3,196.25	
Dues Collected from N. Y. Zoological Soc. Employees	5,395.42	
Profit from Sale of Stock	214.92	13,642.56

Contributed by the N. Y. Zoological Society:

Income from Carnegie Pension Endowment.....	\$ 3,500.63	
General Income Fund (Transfer).....	6,499.37	10,000.00
		<u>\$201,469.17</u>

EXPENDITURES

Physical Examinations	\$ 10.00	
Refunds Account Resignations	1,464.29	
Death Benefit Payments	988.80	
Clerical Services and Expenses	345.00	
Pension Payments	24,994.38	\$ 27,802.47

Funds as of December 31, 1936:

Investments at Cost	<u>\$167,570.70</u>
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Uninvested balance

At the City Bank Farmers Trust Co... \$4,413.70		
At Corn Exchange Bank Trust Co... 1,682.30	6,096.00	173,666.70
		<u>\$201,469.17</u>

Note: By resolution of the Executive Committee adopted December 29, 1936, the name of this Account is to be changed to "Pension Fund" as of January 1, 1937, and the figures increased by the transfer to this Account of the cash and securities in Auxiliary Pension Account and Carnegie Pension Endowment Account. In addition \$250,000 is to be set apart in General Endowment Account for the benefit and purposes of the Pension Fund, on the conditions stated in the resolution.

SEE NOTE, PAGE 61.

H. R. MITCHELL

Asst. to Treasurer in Charge of Pensions
December 31, 1936

CORNELIUS R. AGNEW

Treasurer

PEAT, MARWICK, MITCHELL & CO.
ACCOUNTANTS AND AUDITORS
70 Pine Street
New York, N. Y.

Accountants' Report

Mr. George C. Clark, Chairman, Auditing Committee,
New York Zoological Society, New York, N. Y.

We have made an examination of the accounts of the New York Zoological Society and of the "Pension Fund Income Account" for the year ended December 31, 1936. In connection therewith, we examined accounting records of the Society and other supporting evidence and obtained information and explanations from officials and employees of the Society.

The subscriptions, donations and dues reported as received, and income from investments have been properly accounted for. The securities and cash balances as at December 31, 1936, as shown in the accounts of the funds presented herewith, have been checked and found in agreement with a list of securities obtained from the custodians and acknowledgments of bank balances obtained from the depositaries. Satisfactory vouchers have been produced in support of the expenditures.

In our opinion, based upon such examination, the foregoing schedules present the condition of the funds as at December 31, 1936, and the transactions relating to the funds of the Society and the "Pension Fund Income Account" for the year under review.

PEAT, MARWICK, MITCHELL & CO.

New York, N. Y.
March 10, 1937.

Report of the Auditing Committee OF THE NEW YORK ZOOLOGICAL SOCIETY

To the President and Board of Trustees
of the New York Zoological Society

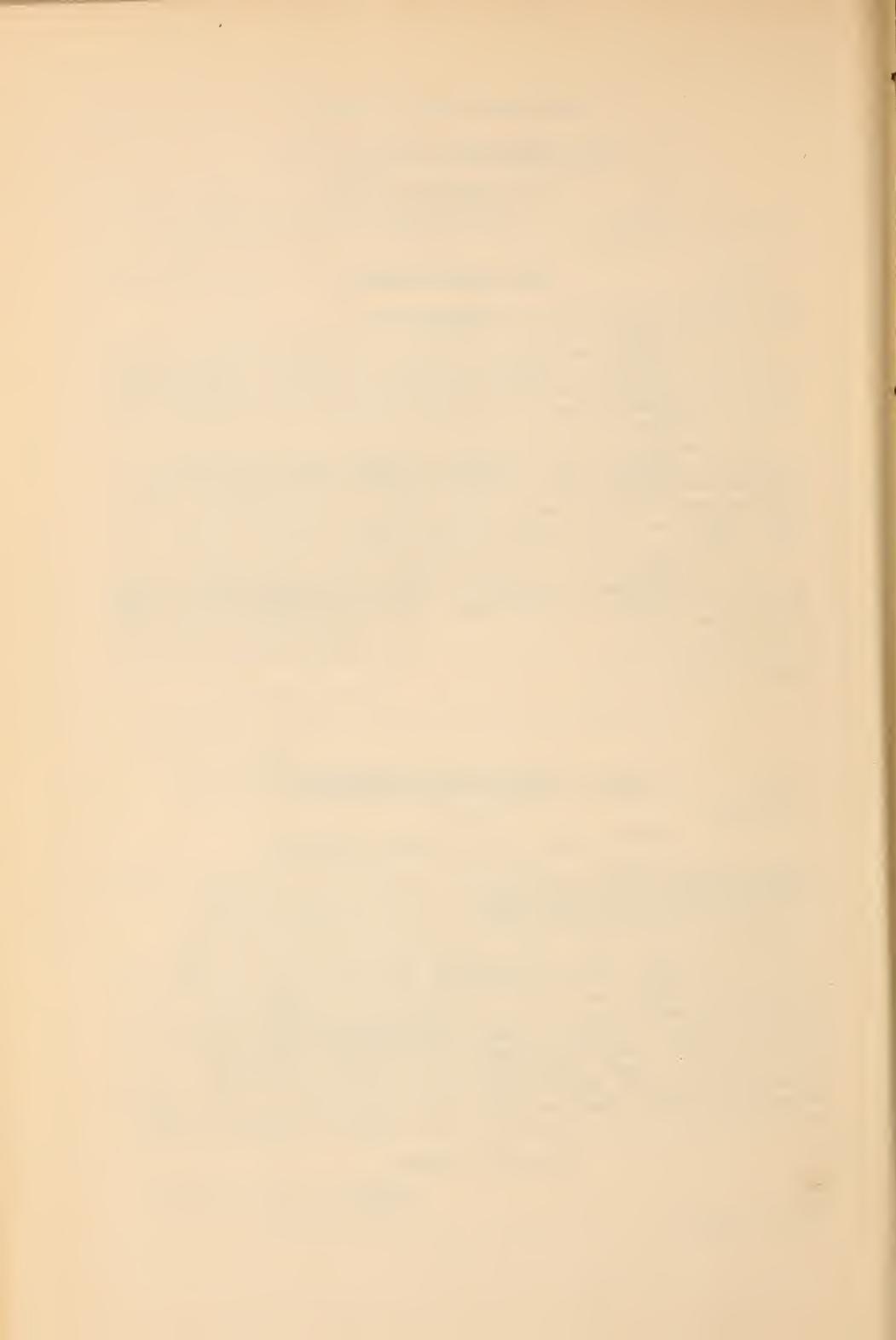
Dear Sirs:—

We would report that we have examined the annual audit of the books and accounts of the New York Zoological Society for the year ending December 31, 1936, made by Messrs. Peat, Marwick, Mitchell & Co., accountants and auditors, and herewith submit the same to you as a complete and satisfactory audit of said books and accounts, including the General Endowment Fund, Special Endowment Funds, Income Fund, the Carnegie Pension Fund, the Pension Fund Income Account and the Privilege Account, it appearing that all expenditures and receipts of the various accounts are fully set forth therein, that the cash on hand and at the various depositories has been verified and found correct, and that all securities in which the funds of the Society are invested have been examined and found as reported.

Respectfully submitted,

GEORGE C. CLARK, *Chairman*
WARREN KINNEY

March 20, 1937



LIST OF ACCESSIONS BY THE
New York Zoological Society
AT THE ZOOLOGICAL PARK

1936

BY GIFT

- ADAMS, DROUET, Westport, Conn.:
Box Turtle.
- ALLEN, MRS. A. E., New York City:
Ruby-throated Hummingbird.
- ALLEYNE, DARNLEY, New York City:
White Rats (30 specimens).
- ARMIENTO, MISS BETTY, New York City:
Garter Snake.
- ARMSTRONG, G. L., Chief Officer, S.S. *San Jose*, New York City:
Purple Gallinule.
- ATTANASIO, MRS. LAVINIA, New York City:
Peruvian Cavy.
- AUSTIN, CLIFFORD, Brooklyn, N. Y.:
African Chameleon.
- AYRES, DOUGLAS, Fort Plain, N. Y.:
Horned Lizard.
- BAILEY, SYDNEY, New York City:
1 Alligator, 1 Soft-shelled Turtle.
- BALLARD, SAMUEL J., New York City:
American Sparrow Hawk.
- BARKER, MRS. MAY, Durban, South Africa:
Boomslangs (3 specimens).
- BARRY, JOHN A., Dobbs Ferry, N. Y.:
White Rats (7 specimens).
- BAXTER, MISS ALICE E., Flushing, L. I., N. Y.:
Water Snake.
- BEACH, MISS MARY ELIZABETH, West Hartford, Conn.:
Kinkajou.
- BECKER, MRS. K., New York City:
1 Painted Turtle, 3 Alligators.
- BECKER, MRS. W. S., Queens Village, L. I., N. Y.:
Skunk.
- BEILIN, HARRY, New York City:
Alligators (2 specimens).
- BEINERT, MRS. A., Fort Lee, N. J.:
Opossum.
- BENJAMIN, ERIC, New York City:
2 Pine Snakes, 1 Scarlet Snake, 1 Red Skink, 3 Pine Swifts. Total, 7 specimens.
- BENNETT, W. C., Red Bank, N. J.:
8 Water Snakes, 1 King Snake, 3 Hog-nosed Snakes. Total, 12 specimens.
- BERGBOHM, MISS KAROLINE, New York City.
Green Grass Parrakeet.

- BESCOROVA, ALEXANDER, New York City:
2 South American Night Snakes, 1 Green Tree Snake, 1 Tarantula. Total, 4 specimens.
- BIOLOGY DEPARTMENT, SOUTH SIDE HIGH SCHOOL, Newark, N. J.:
Murine Opossum.
- BLACKBURN, MRS. H., Yonkers, N. Y.:
Raccoon.
- BLAESKE, JOHN, JR., Bloomfield, N. J.:
Water Snake.
- BLOOMINGDALE, MRS. L. M., Scarsdale, N. Y.:
Alligator.
- BOWDISH, BEECHER S., Demarest, N. J.:
Western House Finch.
- BREEDING AND LABORATORY INSTITUTE, New York City:
White Rats (25 specimens).
- BROWNING, KIRK, Ridgefield, Conn.:
1 Iceland Gull, 1 Red-shouldered Hawk.
- BULLOCK, MISS HALLIE, New York City:
Blue-fronted Amazon.
- BURDICK, SYLVAN, Brooklyn, N. Y.:
Hog-nosed Snake.
- CAHALL, MRS. WILLIAM, New York City:
Ruby-throated Hummingbird.
- CALLAHAN, J., New York City:
Horned Lizards (2 specimens).
- CASSEUS, MRS. WILLIAM T., New York City:
Rabbit.
- CERAND, ALBERT B., JR., Scarsdale, N. Y.:
Alligator.
- COHN, MASTER ROY M., New York City:
Alligator.
- CONRAD, LESLIE M., JR., Lakehurst, N. J.:
Pine Snake.
- CROCKER, TEMPLETON, San Francisco, Calif.:
Clarion Island Burrowing Owl.
- DAHL, MISS DOROTHY, Woodside, L. I., N. Y.:
Saw-whet Owl.
- DAVIS, HOWARD T., Gary, Ind.:
Raccoon.
- DAYTON, MISS DOROTHY, New York City:
Horned Lizard.
- DELACOUR, JEAN, Clères, France:
2 Rheinhardt's Argus Pheasants, 2 Hemprich's Hornbills.
- DE LAY, GEORGE, New Providence, R. I.:
Alligators (3 specimens).
- DESMOND, ANTHONY, New York City:
Hedgehog.
- DEWELL, HARVEY, New York City:
Horned Lizard.
- DiFIORE, MRS. GEORGE, New York City:
White Rats (24 specimens).
- DITMARS, DR. RAYMOND L., New York City:
12 Dominican Frogs, 1 *Pseudis paradoxis* Tadpole.
- EICHELMANN, HENRY C., New York City:
Plated Lizards (2 specimens).
- EISSNER, LEO, New York City:
Alligators (2 specimens).

- FARNSWORTH, F. C., Upper Montclair, N. J.:
Eastern Cardinal.
- FAST, A., New York City:
Red-shouldered Hawk.
- FIELDSTON SCHOOL, New York City:
2 Garter Snakes, 25 White Rats.
- FINLEY, DR. VINCENT, Manchester, Conn.:
Timber Rattlesnakes (14 specimens).
- FISHER, S., New York City:
Box Turtle.
- FLANDERS CLUB, Riverhead, L. I., N. Y.:
1 Duck Hawk, 1 American Goshawk, 1 Great Horned Owl. Total, 3 specimens.
- FOEHL, A., Philadelphia, Pa.:
Milk Snake.
- FOLWELL, MRS. N., New York City:
Boa Constrictor.
- FREY, C. J., New York City:
African Chameleon.
- FRICK, CHILDS, Roslyn, L. I., N. Y.:
1 Otter, 1 Black Bear.
- GALM, JOHN, New York City:
1 Oregon Junco, 1 Mangrove Snake, 1 King Snake. Total, 3 specimens.
- GIANNI, MISS ADELE, Brooklyn, N. Y.:
Alligator.
- GIORDANO, R. N., New York City:
European Blackbird.
- GOELET, WILLIAM, New York City:
Woodchuck.
- GORDON, ROBERT, New York City:
American Crow.
- GRANATH, Dr. L. P., New York City:
Marsh Hawks (3 specimens).
- GRAY, RALPH, Yonkers, N. Y.:
Alligator.
- GREENHALL, ARTHUR M., New York City:
1 Bell's Painted Terrapin, 2 Map Terrapins.
- GRIMM, HARRY RUDOLPH, New York City:
Horned Lizard.
- GUSTOFSON, CHARLES, New Rochelle, N. Y.:
Alligator.
- HAEDRICH, MISS MINA, West Orange, N. J.:
Horned Lizard.
- HANNON, A. JOSEPH, Bear Mountain, N. Y.:
Baby Garter Snakes (33 specimens).
- HARRISON, LEWIS Z., New York City:
Horned Lizard.
- HAYMAN, ARTHUR INGRAM, New Hamburg, N. Y.:
3 Garter Snakes, 4 DeKay's Snakes, 1 Ring-necked Snake, 1 Milk Snake, 1 Spotted Salamander. Total, 10 specimens.
- HENRY FAIRFIELD OSBORN MUSEUM AND ZOO, New Hamburg, N. Y.:
4 Garter Snakes, 1 De Kay's Snake, 1 Black Snake. Total, 6 specimens.
- HEPBURN, MRS. A. BARTON, New York City:
Skunks (2 specimens).
- HIRSH, MURRAY, New York City:
Hog-nosed Snake.

HOLLISTER, MISS GLORIA ELAINE, New York City:

1 Black Spider Monkey, 1 Golden Agouti, 1 Tayra, 1 Ocelot, 1 Silky Ant-eater, 2 Gopher Tortoises, 11 Frogs, 2 Red-winged Ground Doves, 3 Gray-necked Tree Ducks, 2 White-shouldered Blue Tanagers, 2 Little Yellow-headed Blackbirds, 2 Guiana Chachalacas, 1 Yellow-throated Calliste, 2 Yellow-bellied Callistes, 2 Spotted Callistes, 2 Violet Euphonias, 1 Lined Seed-eater, 2 Black-headed Seedeaters, 3 Blue-backed Seedeaters, 1 Pygmy Seed-eater, 1 Field Saffron Finch, 1 Crimson Pileated Finch, 1 Red-underwing Dove, 1 Ruddy Quail Dove, 2 Black-backed Manakins. Total, 49 specimens.

HORTON, J. C., Glastonbury, Conn.:
Alligators (2 specimens).

HUFFORD, P. J., New York City:
Hog-nosed Snakes (2 specimens).

ISRAEL, LEON, New York City:
Bare-throated Bell-bird.

JACKSON, MISS BERTHA, New York City:
Opossum.

JACKSON, GEORGE B., Brooklyn, N. Y.:
Canebrake Rattlesnake.

JONES, L. S., Jersey City, N. J.:
Rhesus Monkey.

KAHNT, GEORGE, New York City:
English Ring-necked Pheasants (2 specimens).

KAPLAN, PHILIP, New York City:
2 Painted Turtles, 2 Horned Lizards.

KAUSER, THEODORE, New York City:
Black Snake.

KETCHUM, REV. ARTHUR, Bedford, N. Y.:
Finsch's Amazon Parrot.

KING, W. A., Brownsville, Texas:
2 Texas Diamond-back Rattlesnakes, 1 Louisiana Mud Snake.

KLEINFELDER, MRS. M., New York City:
2 Wood Turtles, 3 Box Turtles, 2 Painted Turtles. Total, 7 specimens.

KOSSAR, ARNOLD, New York City:
Wood Turtle.

LEVY, WILLIAM, New York City:
1 Spotted Turtle, 1 Painted Turtle.

LEWIS, C. J., Huntington, L. I., N. Y.:
Alligators (2 specimens).

LIDO, EMIL, Rochelle Park, N. J.:
Hog-nosed Snake.

LIEBERS, K., New York City:
Tarantula.

LUDWIGSON, ARNOLD, New York City:
Barred Owl.

LUNDSBERG, MRS. E., New York City:
Virginia Rail.

MACEVoy, MRS. J. T., Belmar, N. J.:
Herring Gull.

McCONNELL, DAVID GRAHAM, and JOHN STUART, Bronxville, N. Y.:
Opossum.

McDOWELL, THOMAS H., Lake Peekskill, N. Y.:
Opossums (2 specimens).

MAGARIELLO, G., New York City:
Green Grass Parrakeet.

MANBAUM, INC., New York City:
South American Boa.

- MANVILLE, MRS. T. F., New York City:
Peach-faced Lovebird.
- MAZER, ALFRED A., New York City:
Golden-crowned Sparrow.
- MEADE, GEORGE P., Gramercy, La.:
3 Say's King Snakes, 1 Chicken Snake, 3 Hog-nosed Snakes, 2 Mud Snakes,
1 Diamond-back Water Snake. Total, 10 specimens.
- METZGER, A., New York City:
Eastern Horned Owl.
- MITCHELL, J. D., Sebring, Fla.:
2 Florida Box Turtles, 1 Slider Terrapin.
- MORRIS, DONALD R., New York City:
Alligator.
- MOSHOLU GOLF COURSE, New York City:
Opossums (2 specimens).
- NALVEN, LIONEL, New York City:
Horned Lizards (2 specimens).
- NIEBUHR, WILLIAM R., New York City:
Alligator.
- O'CONNOR, MRS. THOMAS, New York City:
Laughing Gull.
- OSBORN, FAIRFIELD, New York City:
Blue-eared Glossy Starling.
- PEACOCK, KENNETH, Scarsdale, N. Y.:
Pygmy Rattlesnake.
- PELUSIO, J., Garwood, N. J.:
Alligator.
- PETIT, MAURICE, St. Thomas, Virgin Islands:
Gopher Tortoises (2 specimens).
- PIERRE, MRS. LILLIAN C., Rye, N. Y.:
1 European Blackbird, 2 Common Troupials, 1 Blue Solitaire, 1 Red-billed
Hill-tit, 1 Brazilian Silver-beaked Tanager, 1 Shama Thrush, 2 White Java
Sparrows. Total, 9 specimens.
- POPKIN, MISS REBECCA, New York City:
1 Scarlet Tanager, 1 Saturnine Mockingbird.
- QUINCE, S. BRADDOCK, Mt. Vernon, N. Y.:
Herring Gull.
- QUINT, MISS GRACE T., Brooklyn, N. Y.:
1 Russ Weaver, 2 Strawberry Finches.
- REICH, MRS. L., New York City:
1 Green-cheeked Amazon, 1 Spotted Turtle, 1 Wood Turtle. Total, 3 speci-
mens.
- RICH, MARC C., New York City:
Red-shouldered Hawk.
- ROSSI, CHARLES, Fort Lee, N. J.:
Alligators (2 specimens).
- RUDD, H., Yonkers, N. Y.:
Alligator.
- SAUNDERS, ARTHUR W., Mt. Vernon, N. Y.:
Alligator.
- SCHROEDER, W. C., Maywood, N. J.:
Albino English Sparrow.
- SCHWARTING, WILLIAM, Richmond Hill, L. I., N. Y.:
1 Desert Tortoise, 1 Soft-shelled Turtle, 1 Snapping Turtle. Total, 3 speci-
mens.
- SHAW, WALTER J., Bagnall, N. Y.:
Desert Gopher.

- SLOAN, MRS. A., New York City:
 Box Turtle.
- SMITH, HOWARD M., New York City:
 Raccoon.
- SNYDER, PAUL, Bloomfield, N. J.:
 3 Timber Rattlesnakes, 1 Moccasin.
- SPERRY, J. H., Atlanta, Ga.:
 Box Turtle.
- SPEYERS, JULIAN, New York City:
 Salamander.
- SPINDLER, HARRY, Cincinnati, Ohio:
 White Turtle Doves (2 specimens).
- STERN, MRS. JOSEPH, New York City:
 1 Virginia Cardinal, 1 European Blackbird.
- STOCKHAUSEN, CAPTAIN F., New York City:
 1 Florida Raccoon, 1 Gopher Snake.
- STROBEL, MISS VIOLA, New York City:
 South American Boa Constrictor.
- SWAN, HARRY B., Woodside, L. I., N. Y.:
 Greater Hill Mynas (2 specimens).
- TALLMAN, MRS. JOHN H., JR., Mt. Vernon, N. Y.:
 Sapajou Monkeys (2 specimens).
- TALLMAN, O. E., Minneapolis, Minn.:
 Bull Snake.
- THAYSEN, MRS. C., New York City:
 Painted Bunting.
- THOMAS, MRS. P. C., New York City:
 Golden Pheasant.
- THOMPSON, MRS. E. P., New York City:
 Slider Turtles (4 specimens).
- TIEVERS, MRS. MARIE, New York City:
 Guinea Pig.
- TOBIN, JOHN J., New York City:
 Mallard Ducks, (3 specimens).
- TOOTH, MRS. GILBERT, Newark, N. J.:
 White Rats (2 specimens).
- TUTTLE, BURTON, Monticello, N. Y.:
 Opossum.
- TWINE, L., New York City:
 Alligator.
- VERMEHREN, MISS CATHLEEN, New York City:
 Western House Finch.
- VETERANS OF FOREIGN WARS, POST 596, Mt. Vernon, N. Y.:
 Sapajou.
- VOGEL, ARTHUR, Teaneck, N. J.:
 Raccoon.
- VORSTER, A., Durban, South Africa:
 2 Meerkats, 1 Night Adder, 1 Cobra. Total, 4 specimens.
- VOTEY, CHARLES, Scarsdale, N. Y.:
 1 Black Snake, 1 Water Snake, 1 Snapping Turtle, 1 Painted Turtle. Total, 4 specimens.
- WEBER, DR. NEIL, Grand Forks, N. D.:
 Horned Frog.
- WEBER, WILLIAM A., New York City:
 Canadian Porcupine.
- WENDOVER, WILLIAM E., Peekskill, N. Y.:
 Great Horned Owls (2 specimens).

- WESTON, T. B., Baltimore, Md.:
Pilot Blacksnake.
- WILDEY, ROLAND D., Yonkers, N. Y.:
Skunk.
- WILKINSON, E. E., Philadelphia, Pa.:
1 Green Cardinal, 1 White-throated Seedeater.
- WOLFF, MRS. A., New York City:
1 Box Turtle, 1 Wood Turtle.
- WOODMAN, MRS. S., New York City:
Painted Turtle.
- ZAWAR, WILLIAM, New York City:
Painted Turtles (9 specimens).
- ZELLNER, ALBERT M., Yonkers, N. Y.:
Alligator.
- ZOOLOGICAL SOCIETY OF LONDON, London, England:
23 European Adders, 21 European Grass Snakes.

National Collection of Heads and Horns

BY GIFT

- AMERICAN MUSEUM OF NATURAL HISTORY, New York City:
Chillingham Bull (*Bos taurus*). Mounted Head.
- DEPARTMENT OF THE INTERIOR, NATIONAL PARKS OF CANADA, Ottawa:
Wood Bison (*Bison americanus*). Horns and Skin.
- QUACKENBUSH, MR., New York City:
American Wapiti (*Cervus canadensis*). Mounted Head.
American Moose (*Alces alces americana*). Mounted Head.

BY DEPOSIT

- HOTCHKISS, MISS ESTHER, New York City:
Woodland Caribou (*Rangifer tarandus caribou*). Mounted Head.
White-tail Deer (*Odocoileus virginianus*). Mounted Head.

Library

- AMERICAN PLANNING & CIVIC ASSOCIATION, Washington, D. C.:
American Planning and Civic Annual, 1936, by Harlean James.
- BENEDICT, DR. FRANCIS G., Boston, Mass.:
The Physiology of the Elephant, by Francis G. Benedict.
- GRANT, MADISON, New York City:
Proboscidea, Vol. I, by Henry Fairfield Osborn.
- KOHTS, N., Moscow, Russia:
Infant Ape and Human Child, by N. Kohts.
- LYON, MARCUS WARD, JR., South Bend, Ind.:
Mammals of Indiana, by Marcus Ward Lyon, Jr.
- NATIONAL COMMISSION FOR MENTAL HYGIENE, New York City:
Research in Dementia Precox, by Nolan D. C. Lewis.
- VANDERBILT, WILLIAM K., New York City:
Bulletin of the Vanderbilt Marine Museum, Vol. VI, by Lee Boone.

Plants

- BERGER, MRS. A., New York City:
1 Rubber Plant (*Ficus elastica*).
- BOLTON, N. C., New York City:
1 *Dracena massangeana*.

FEINGOLD, MRS. SIMON, New York City:

2 *Sanseveria zeylanica*.

1 *Begonia metallica*.

1 *Pandanus Veitchii*.

1 *Dracena massangeana*.

GERHARDT, MRS., New York City:

1 *Dracena massangeana*.

HAUGWITZ, WILLIAM, New York City:

1 *Dracena massangeana*.

MILLER, MRS. M., New York City:

1 *Dracena massangeana*.

MYERS, JOHN, New York City:

1 Rubber Plant (*Ficus elastica*).

1 *Dracena massangeana*.

ROTHMAN, MRS. SAMUEL, New York City:

1 Rubber Plant (*Ficus elastica*).

SIMONEKOFF, MRS., New York City:

1 Rubber Plant (*Ficus elastica*).

SOLOMON, MRS., New York City:

1 *Dracena massangeana*.

STRASCHEK, HERBERT, New York City:

1 *Dracena massangeana*.

LIST OF ACCESSIONS BY THE
New York Zoological Society
AT THE AQUARIUM

1936

ABRAHMS, MRS. ADA, New York City:
Turtles (2 specimens).

ASTARITA, R., New York City:
Wood Turtle.

ATZ, JAMES W., South Orange, N. J.:
1 Muhlenberg Turtle, 1 Eastern Box Turtle. Total, 2 specimens.

BAGLEY, MISS H., New York City:
Assorted Goldfishes.

BANNING, FRANK A., Noank, Conn.:
1 Blue Lobster, 2 Spotted Lobsters. Total, 3 specimens.

BENNETT, W. C., Redbank, N. J.:
1 Yellow Slider, 1 Red Slider. Total, 2 specimens.
Leopard Frog Eggs.

BICKFORD, MISS JEAN, New York City:
Box Tortoise.

BISSERT, ROBERT, New York City:
Painted Turtles (2 specimens).

BLUM, ROBERT, New York City:
Box Tortoise.

BOWES, MAJOR EDWARD, New York City:
3-foot Alligator.

BRADY, MASTER PHILIP, New York City:
Box Tortoise.

BRAMER, MRS. H. M., New York City:
Small Turtles (5 specimens).

BROWN, MISS LILLIAN C., New York City:
Small Alligator.

BRUSH, MASTER THOMAS, New York City:
Astronotus ocellatus.

BULLOCK, MASTER GRANVILLE, Jersey City, N. J.:
Small Alligators (2 specimens).

BURBRIDGE, J., New York City:
Small Alligators (2 specimens).

CARDONE, ANTHONY, New York City:
South American Frog.

CEBEK, LOUIS, New York City:
Fiddler Crabs (2 specimens).

CHADWICK, MRS. G., New York City:
Box Tortoise.

COCHU, F., New York City:
Mastacembelus eel.

COLON, PEDRO, New York City:
Turtle.

- CONSERVATION DEPARTMENT, Trenton, N. J.:
Collection Rainbow Trout.
- COOK, E., New York City:
Diamond-back Terrapin.
- CORMACK, DOUGLAS, New York City:
Small Alligator.
- CUSTA, EDWIN, New York City:
Painted Turtle.
- DE ROCHER, JAMES, U. S. FISHERIES STATION, Nashua, N. H.:
Sunapee Golden Trout (7 specimens).
- DEPARTMENT FISHERIES AND GAME, Concord, N. H.:
Collection of Fishes.
- DIAMOND, GEORGE, New York City:
Small Alligator.
- DOLAN, MRS. T., New York City:
Box Tortoises (2 specimens).
- DOLL, CAPTAIN EDDIE, New York City:
Star Gazer.
- DORMAN, HARRY J., New York City:
Small Alligator.
- DOUGHTY, NORMAN W., Lawrence, L. I.:
3-foot Alligator.
- DOWE, MASTER BRUCE, New York City:
Box Tortoise.
- DUNSMORE, J. DOUGLAS, New York City:
Spotted Salamander Eggs.
- ELIAS, MASTER PAUL, New York City:
Box Tortoise.
- ERDMANN, MRS. GERTRUDE, New York City:
Box Tortoise.
- ERGOTTINO, ANGELO, New York City:
Salamander.
- EWE, F. J., New York City:
Turtle.
- FEROSIN, A., New York City:
Small Alligators (2 specimens).
- FIDEL, H., New York City:
Dovekie.
- FISHKIN, FRANK L., Yonkers, N. Y.:
Loggerhead Turtle.
- FLYNN, V., New York City:
1 Wood Turtle, 1 Painted Turtle. Total, 2 specimens.
- FRANKS, GEORGE, Rahway, N. J.:
Red-bellied Slider.
- GERSHMAN, MISS BEATRICE, New York City:
Turtle.
- GESSNER, R., New York City:
Small Alligator.
- GOMEZ, U. C., New York City:
Geophagus jurupari (3 specimens).
- GREENHALL, MRS. F., New York City:
Small Alligator.
- GUNTER, OTTO, New York City:
Small Alligator.
- HALPERN, MRS. M., New York City:
Small Alligator.

- HARDING, A., New York City:
Painted Turtle.
- HARRISON, G. O., New York City:
Box Tortoise.
- HARTMANN, PAUL, New York City:
Turtle.
- HEINER, E., New York City:
Painted Turtle.
- HEGESON, R., Whitestone, L. I.:
Small Alligator.
- HELLMAN, A., New York City:
Wood Turtle.
- HOFFMAN, W., New York City:
Small Alligators (2 specimens).
- HORTON, JAMES, New York City:
Young Pickerel Frogs (6 specimens).
- JOHNSTON, WILLIAM D., Englewood, N. J.:
Small Alligator.
- JOSEPH, D., New York City:
Small Alligator.
- JOZEFIAK, HENRY, Bayonne, N. J.:
Small Alligator.
- KAUFMAN, YOUNG, New York City:
Collection of Marine Snails from Jamaica.
- KAYL, MISS MATHILDA, New York City:
Painted Turtles (2 specimens).
- KEILEY, STEPHEN T., New York City:
Wood Turtle.
- KLIMEK, MICHAEL, New York City:
Hognose Snakes (2 specimens).
- KLUS, WILLIAM, New York City:
Hognose Snake.
- KNECHT, MISS ALICE, Jersey City, N. J.:
Small Alligator.
- KUHN, ROBERT S., New York City:
Collection of Newts, Tadpoles and Insects.
- LEBENTHAL & Co., New York City:
Painted Turtle.
- MARSHALL, E. A., New York City:
Small Alligator.
- MARTIN, H. BRADLEY, New York City:
Large Amazon Catfish.
- MEMOSI, MRS. CARMEN, New York City:
Cumberland Turtle.
- MITTELMEIER, A., New York City:
Turtles (2 specimens).
- MORONE, A., New York City:
Turtle.
- MUTSCHLER, MRS. GLORIA, New York City:
Small Alligator.
- NEHL, A., New York City:
Small Alligators (2 specimens).
- NETZE, ELIOT, New York City:
1 Garter Snake, 1 King Snake. Total, 2 specimens.
- NICHOLS, HARRY, Englewood Cliff, N. J.:
3-foot Alligator.

- NICHOLS, HARRY, JR., Englewood Cliff, N. J.:
 Small Alligator.
- O'CONNOR, PATRICK, New York City:
 Six-pointed Starfish.
- PARAMOUNT AQUARIUM, New York City:
 Kissing Gourami (22 specimens).
- PEARSALL, MASTER WALTER, Lynbrook, N. Y.:
 1 Painted Turtle, 1 Snapping Turtle. Total, 2 specimens.
- POLLACK, SAMUEL, New York City:
 Turtle.
- ROCKWOOD, MRS. E. L., New York City:
 Box Tortoise.
- ROSENBERG, LOUIS, New York City:
 Small Alligators (2 specimens).
- ROSS, M., New York City:
 Night Lizard.
- ROTH, JOHN J., New York City:
 Snapping Turtle.
- SANTOS, MRS. JOSE, New York City:
 Turtles (2 specimens).
- SATTLER, MISS D. ELWYNA, New York City:
 Collection of Guppies.
- SCHIESS, U. C., New York City:
 2 *Astronotus ocellatus*, 3 *Geophagus jurupari*.
 Total, 5 specimens.
- SCHIFF, HARRY, New York City:
 Horned Toad.
- SCHNOOR, CHAS., Belford, N. J.:
 Harbor Seal.
- SCHWARTZ, MASTER LAWRENCE, New York City:
 Box Tortoises (2 specimens).
- SCHWARTZ, WILLIAM, New York City:
 1 Wood Turtle, 10 Box Tortoises, 3 Painted Turtles. Total, 14 specimens.
- SCHWER, MRS. HERMINE, New York City:
 Cumberland Turtles (3 specimens).
- SCOBINGER, WILLIAM, New York City:
 Small Alligator.
- SEATON, G. W., New York City:
 Collection of Plants and Fishes.
- SEIFTER, N., New York City:
 Snapping Turtle.
- SHAW, LAWRENCE A., New York City:
 Collection of Young *Aequidens latifrons*.
- SHOAL HARBOR FISHERY, Bedford, N. J.:
 Horseshoe Crab.
- SMITH, DR. HOMER, New York City:
 South American Lungfish, *Lepidosiren paradoxa*. (2 specimens).
- STATE FISH HATCHERY, Cold Spring Harbor, N. Y.:
 Collection of Fishes.
- SZURLEY, T., New York City:
 Turtles (2 specimens).
- TAYLOR, J., New York City:
 Small Alligator.
- TERRY, B. F., New York City:
 Small Alligator.

- THOMPSON, DR. DAVID H., Urbana, Ill.:
5 Hybrids—*Allotis humilis* and *Eupomotis gibbosus*, 18 Darters, 5 Quill-backs. Total, 28 specimens.
- TRACY, J., New York City:
Small Alligator.
- TSAKIS, EMIL, New York City:
Painted Turtle.
- VITKAY, S., New York City:
South American Toad.
- VOTEY, CHAS. H. JR., Scarsdale, N. Y.:
10 Spotted Turtles, 2 Snapper Turtles, 39 Painted Turtles. Total, 51 specimens.
- WAUGH, ALBERT, New York City:
Turtle.
- WEDGEFORTH, DR. H. M., San Diego, California:
Fresh Water Turtles (8 specimens).
- WEICH, EDWIN, New York City:
Small Alligator.
- WEISSEL, LEO, New York City:
Turtle.
- WHITEHOUSE, ALFRED W., New York City:
1 Wood Turtle, 2 Box Tortoises. (3 specimens).
- WILLIAMS, MRS. LENA, New York City:
Small Alligator.
- WINTER, HYMAN, New York City:
Turtles (2 specimens).
- WIRTH, HOWARD, New York City:
Small Alligator.
- YANDELL, W. M., Vance, Minn.:
100-pound Giant Snapper.
- YATES, ROBERT, Jersey City, N. J.:
Small Alligator.
- YOLLES, MARK P., New York City:
Small Alligator.
- YOUNG, ALBERT, New York City:
Small Alligators (2 specimens).
- ZAROFF, MISS, New York City:
Map Turtle.
- ZEEB, CHAS., Secaucus, N. J.:
2 Box Tortoises, 1 Painted Turtle. Total, 3 specimens.
- ZIEGLER, MR. AND MRS. WM., JR., New York City:
Hawksbill Turtle.

Miscellaneous

- DIECKMANN, KARL, New York City:
2 Portable Filters, Complete.
- MAUSER, HERMAN W., Westinghouse Lamp Co., New York City:
1 Argon Lamp.
- NADELL, AARON, New York City:
Electrical Equipment for Electric Eel Experiments.
- SHELBY COMPANY, P. L., New York City:
Set of Aquarium Ornaments.



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New York Zoological Society

January 1, 1937

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- *WHITON, HENRY D.

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- VAN NORDEN, MRS. GRACE TALCOTT
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- *WADSWORTH, MAJOR W. AUSTIN
- WADSWORTH, MRS. W. A.
- WAID, D. EVERETT
- WAINWRIGHT, RICHARD T.
- *WALKER, DR. HENRY FREEMAN
- *WANAMAKER, RODMAN
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- *WATSON, FRANCIS A.
- WATSON, JAMES S.
- WEBB, MRS. ALEXANDER S.
- WEBB, HARRY HAVEMAYER
- WEBB, J. WATSON
- *WEBB, DR. W. SEWARD
- WEBER, ORLANDER F., JR.
- WEBSTER, HAMILTON FISH

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- *WELCHER, MRS. FANNY AVERY
- WELLS, MRS. OLIVER J.
- *WENDELL, EVERET JANSEN
- *WETMORE, CHARLES W.
- *WETMORE, GEORGE PEABODY
- WHARTON, WILLIAM P.
- WHEALTON, LOUIS N.
- WHITE, EDWARD
- *WHITE, JOHN JAY
- WHITEHEAD, MRS. JOHN JAY, JR.
- *WHITEHEAD, PAUL
- WHITMAN, MALCOLM D.
- *WHITNEY, CASPAR
- WHITNEY, CORNELIUS VANDERBILT
- *WORTHINGTON, C. C.
- *WHITNEY, HARRY PAYNE
- *WHITNEY, PAYNE
- WILLETS, ELMORE A.
- WILLETS, HOWARD
- WILLIAMS, CLARK
- WILLIAMS, WILLIAM
- *WING, JOHN D.
- WING, JOHN MORGAN
- WINTHROP, BEEKMAN
- *WINTHROP, EGERTON L.
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- AYRES, MRS. ALFRED B.
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 BACHE, JULIUS S.
 *BACON, EDGAR MAYHEW
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 *BALDWIN, JARED G.
 BALDWIN, MRS. ROBERT HOWE
 BALDWIN, SHELDON
 BALLANTINE, ARTHUR A.
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 BALLARD, SUMNER
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 BANGS, FRANCIS
 BARNARD, J. AUGUSTUS
 *BARNES, JAMES
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 BOARDMAN, MRS. KENNETH
 BOARDMAN, MISS R. C.
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 BOETTGER, THEODORE
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 BROWN, CHARLES S., JR.
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 BROWNING, WILLIAM H.
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 BUCK, ELLSWORTH B.
 BUCKLE, LEWIS M.
 BUCKNER, THOMAS A.
 BUECHNER, C. FRED
 BUGBEE, DR. HENRY G.
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 BULKLEY, MRS. EDWIN M.
 BULKLEY, J. O.
 BULKLEY, JONATHAN
 BULKLEY, MRS. JONATHAN
 BURBANK, DR. REGINALD
 BURDEN, MRS. W. A. M.

* Deceased

- BURGESS, THORNTON W.
 BURLINGHAM, CHARLES C.
 BURNHAM, GORDON W.
 *BURRELL, WILLIAM S.
 BURRILL, EDWARD L.
 BUSH, MRS. D. FAIRFAX
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 CABOT, JOHN, JR.
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 CHILD, MISS RUTH AUCHINCLOSS
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 *CHURCH, GEORGE H.
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* Deceased

- DELAFIELD, LEWIS L.
 DELAFIELD, ROBERT HARE
 DELANO, LYMAN
 DELANO, MOREAU
 DE LONG, MRS. GEORGE B.
 DEMING, LAURENT C.
 DENBY, EDWIN H.
 DEPERIGNY, COMTESSE
 DERBY, JAMES LLOYD
 DERHAM, MRS. CHARLES, JR.
 DETMER, JULIAN F.
 DICKEY, MRS. CHARLES D.
 DIENST, A. P.
 DIKE, OSCAR D.
 DIX, MRS. ALFRED P.
 DIXON, F. E.
 DOANE, BENJAMIN H.
 DODD, ALFRED W.
 DODGE, CLEVELAND E.
 DOMINICK, GAYER G.
 DOMMERICH, OTTO L.
 DONALD, MISS ANNA E.
 DOOLITTLE, F. W.
 DOUGLAS, MISS ELIZABETH
 DOUGLAS, WILLIAM H.
 DOWNEY, JOHN I.
 DOWS, MRS. DAVID, SR.
 DOWS, TRACY
 DRAPER, CHARLES D.
 DUANE, MRS. JAMES MAY
 DuBois, Miss MARGARET
 DuBois, Mrs. MATTHEW B.
 DUEL, DR. ARTHUR B.
 DUNCAN, STUART
 DUNHAM, MRS. EDWARD KELLOGG
 DUNHAM, LEWIS L.
 du PONT, H. F.
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 ELLSWORTH, D. S.
 ELSBERG, DR. CHARLES A.
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 ERDMANN, MARTIN
 ERDMANN, WILLIAM
 ERLANGER, MILTON S.
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 EWING, GEORGE R. M.
 FABER, EBERHARD
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 FAHNESTOCK, MRS. ERNEST
 FAHNESTOCK, HARRIS
 *FAHNESTOCK, WILLIAM
 FALK, EDWIN A.
 FAY, FRANCIS B.
 FEDER, JOSEPH T.
 FERRY, MANSFIELD
 FEUSS, MAJOR ANDREW W.
 FIELD, MRS. AUGUSTUS B.
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 FITZGERALD, CHARLES MAURICE
 FITZIMMONS, PAUL
 FLAGLER, HARRY HARKNESS
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 FLEMING, MATTHEW C.
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 FRANK, LOUIS
 *FRASER, ALEXANDER V.
 FRASER, MRS. GEORGE C.
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 FREEMAN, MISS GERTRUDE A.
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 FROMM, S. W.
 FROTHINGHAM, WILLIAM I.
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 GALBAN, EUGENIO
 GALE, L. R.
 GALLAND, NATHANIEL K.
 GALLATIN, GOELET
 GALLATIN, MRS. GOELET

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- GALLOWHUR, W. G.
 GARRET, MISS LAURA B.
 GAVIN, MRS. MICHAEL
 GAWTRY, LEWIS
 GEDDES, DONALD G.
 GERDES, THEODORE R. N.
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 HUTCHINS, HARLEY D.
 HUTTON, E. F.
 ISAACS, STANLEY M.
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 ISELIN, MRS. LEWIS

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ISELIN, MISS LOUISE M.
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 JONES, H. LEROY
 JONES, PERCY C.
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 KAGAN, LEO B.
 KAHN, MRS. OTTO H.
 KALISH, MISS ANNIE
 KANE, MRS. DELANCEY
 KANTOR, DR. MARK G.
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 KEAN, MRS. HAMILTON FISH
 KEAN, JOHN
 KEAN, ROBERT WINTHROP
 KEECH, MRS. FRANK BROWNE
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 KELLEY, NICHOLAS
 KELLY, DR. HOWARD A.
 KEMPLAND, WILLIAM C., JR.
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 KENT, EDWIN C.
 KEUFFEL, W. G.
 KEYLOVITZ, PHILIP
 KIERNAN, PETER D.
 KILMARX, LOUIS E.
 KING, MISS MINNIE P.
 KINGSFORD, IRVING B.
 KINGSLEY, W. M.
 KINKEAD, MISS JENNIE H.
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 KINNEY, MRS. WARREN
 KIRKHAM, WILLIAM B.
 KIRKMAN, SIDNEY A.
 KISSEL, MRS. W. THORN
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 KLEEMAN, ARTHUR S.
 KLEIN, D. EMIL
 KLINGENSTEIN, CHARLES
 KNAPP, ARNOLD
 KOCH, EDWARD R.
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 KOLLSTEDE, CHARLES A.
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 KRAUSE, HOLGER E.

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 KUHN, AUGUST
 KUHN, JULIUS
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 *KURSHEEDT, ALPHONSE H.
 KURZMAN, CHARLES C.
 KUSER, JOHN DRYDEN
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 *KUTTROFF, ADOLPH
 LA BRANCHE, GEORGE M. L., JR.
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 LEGG, WILLIAM M.
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 LESLIE, MRS. J. C.
 LEVEY, CHARLES BISPHAM
 LEVY, LOUIS S.
 LEWISOHN, ADOLPH
 LEWISOHN, SAMUEL A.
 LEYENDECKER, RICHARD A.
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 LOW, ETHELBERT IDE
 LOWELL, JAMES B.
 LUDLOW, MRS. BANYER
 LUDLUM, C. A.
 LUEDER, C. G.
 LUEDER, E. L.
 LUKE, ADAM K.
 MCALPIN, MRS. CHARLES W.
 MCALPIN, DR. K. R.
 MCCREERY, HENRY FORBES
 MCCULLOH, J. S.

* Deceased

- McDONALD, C. ERIC W.
 McEWEN, ALFRED
 McEWEN, PAUL
 McEWEN, MRS. PAUL
 MCFADDEN, L. E.
 MCFADDEN, PHILIP G.
 MCILHENNY, EDWARD A.
 MCKAY, MRS. ROBERT GORDON
 MCKELVEY, ROBERT
 *MCKIM, LEROY
 MCLANE, THOMAS S.
 McNAIR, WILLIAM
 MCNAUGHTON, LAWRENCE J.
 MAAS, MILTON A.
 MAC LEAN, MRS. CHARLES F.
 MACK, ARTHUR C.
 MACK, MRS. WALTER S.
 MAETH, LYLE S.
 MAGER, F. ROBERT
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 MANN, MRS. GEORGE W.
 MAPES, EUGENE E.
 MARCKWALD, ALBERT H.
 MARESI, POMPEO M.
 MARIENHOFF, MISS BETH
 MARKHAM, ROBERT D.
 MARSH, CHARLES CAPRON
 MARSHALL, CHARLES C.
 MARSTON, HUNTER S.
 MARTIN, BRADLEY, JR.
 MARTIN, MRS. GRINNELL
 MARTIN, MRS. HOWARD TOWNSEND
 MARVIN, LANGDON P.
 MARVIN, MRS. LANGDON P.
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 MAXWELL, FRANCIS TAYLOR
 MAXWELL, HOWARD W.
 MAXWELL, WILLIAM
 MAYNARD, MRS. WALTER E.
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 MITCHELL, GRANT
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 MOREHEAD, JOHN M.
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 MORGAN, MISS C. L.
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 NAUMBURG, MRS. WALTER W.
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 OLcott, DUDLEY
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 REID, Mrs. OGDEN MILLS
 REID, WALLACE
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 REISCHMAN, HENRY R.
 REISINGER, CURT H.
 REMINGTON, FRANKLIN
 REMINGTON, SETH P.
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 RICHARD, L. A.
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 ROOT, ELIHU
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 ROUNSEVEL, Mrs. ASHTON
 ROWLAND, THOMAS
 RUHE, LOUIS
 RUNYON, CLARKSON, JR.
 RUNYON, E. W.

* Deceased

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 SELIGMAN, WALTER
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 SEXTON, MRS. R. W.
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 SHAW, WALTER J.
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 SHEETS, DR. ELMER A.
 SHEFFIELD, JAMES R.
 SHEFFIELD, MRS. JAMES R.
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 SHONNARD, HORATIO S.
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 SKEEL, MRS. ROSWELL, JR.
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- SLADE, FRANCIS LOUIS
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 SPRINGS, RICHARD A.
 STANLEY, ALFRED
 STANLEY, HAROLD
 STANWICK, CHARLES A.
 STARR, HOWARD W.
 *STARR, LOUIS MORRIS
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 STEIN, MRS. ALEXIS W.
 STEINBECK, EDWARD
 STEPHENS, RODERICK
 STERLING, MRS. ROBERT D.
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 STEWART, W. A. W.
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 STRAUS, PERCY S.
 STRAUSS, FREDERICK
 STRINGFELLOW, MISS ETHEL GREY
 STRITTER, MISS E. ELEANOR
 STROOCK, JOSEPH
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 STURGIS, REGINALD H.
 SULZBERGER, ARTHUR HAYES
 SUYDAM, MRS. LAMBERT
 SWAN, JOSEPH R.
 SWANSON, DR. FRITZ J.
 SWANZY, MRS. FRANCIS MILLS

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 SYKES, WALTER H., JR.
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 *TAG, MRS. ANNA
 TAYLOR, HAROLD L.
 TAYLOR, MRS. HENRY OSBORN
 TAYLOR, JAMES B.
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 TAYLOR, ROBERT COLEMAN
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 TERRY, MISS MARION J.
 TERRY, RODERICK, JR.
 THATCHER, MRS. T. D.
 THAW, J. C.
 *THAYER, HARRY BATES
 THEBAUD, MRS. PAUL
 THOMAS, HARVEY M.
 THOMAS, MRS. HOWARD L.
 THURSBY, MRS. SYDNEY
 TIEDEMANN, HENRY F.
 TIMME, WALTER, M.D.
 TIMOLAT, JAMES G.
 TINQUE, WILLIAM J.
 TISON, ALEXANDER, JR.
 TITUS, ROBERT R.
 TITUS, MRS. ROBERT R.
 TRENCH, C. J.
 TRUMBUll, WALTER
 TUCKER, MRS. AGNES
 TUCKER, CARL
 TUCKERMAN, PAUL
 TURNBULL, ARTHUR
 TURNBULL, MRS. RAMSAY
 TWEED, HARRISON
 TYLER, MRS. VICTOR MORRIS
 VALENTINE, MISS MARGUERITE E.
 VAN ANDA, CARR V.
 VAN CORTLAND, AUGUSTUS
 *VANDERBINT, TEUNIS J.
 VANDERBILT, WILLIAM H.
 VANDERLIPP, W. T.
 VANDERPOEL, MRS. JOHN A.
 VAN GERBIG, BAREND
 VAN INGEN, DR. PHILIP
 VAN NORDEN, OTTOMAR H.
 VAN WEZEL, MRS. LOUISA
 VERNAY, ARTHUR S.
 VETTEL, MRS. ROSA
 VINEBERG, DR. HIRAM N.
 VOELKER, JOHN PH.
 VOIGHT, WILLIAM L.
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- VON ZEDLITZ, MRS. ANNA M.
 WAGSTAFF, ALFRED, 3RD.
 WALKER, MISS MIRIAM DWIGHT
 WALKER, STUART
 WALLERSTEIN, DR. MAX
 WALTER, MARTIN
 WALTER, WILLIAM I.
 WARD, ARTEMAS, JR.
 WARD, DR. WILBUR
 WARD, WILLIAM F.
 WARDWELL, ALLEN
 WATERBURY, MISS FLORENCE
 WATSON, MRS. J. HENRY
 WEATHERBEE, MRS. EDWIN H.
 WEBB, VANDERBILT
 WEBB, MRS. VANDERBILT
 WEBB, MRS. WILLIAM SEWARD
 WEBER, ORLANDO F.
 WEIMER, HENRY L.
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 WELCH, LEWIS S.
 WELLDON, SAMUEL A.
 WELLS, MRS. EDWARD H.
 WHEELOCK, WILLIAM H.
 WHEELWRIGHT, DR. JOSEPH S.
 WHITE, MISS CAROLINE
 WHITE, HAROLD T.
 WHITE, MISS MARTHA R.
 WHITEHOUSE, WILLIAM F.
 WHITMAN, WILLIAM, JR.
 WHITNEY, MRS. HOWARD F.
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 WHITTEMORE, GEORGE W.
 WHITTEMORE, HOWARD
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 WILE, EDWIN
 WILLETS, J. MACY
 WILLIAMS, ERNEST
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 WILLIAMSON, CLIFTON P.
 WILSON, HENRY WILLIAM
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 WINTER, EZRA
 WITTMAN, JOSEPH
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 WOOD, ARNOLD
 WOOD, CLARENCE W.
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 WOOD, WILLIAM CONDON
 WOODWARD, MRS. WILLIAM
 WOOLEY, C. M.
 WOOLSEY, GEORGE M.
 WORCESTER, WILFRED J.

* Deceased

WORTIS, DR. S. BERNARD
 WRIGHT, MISS ALICE I.
 WURM, DR. CARL, JR.
 WYLIE, JAMES A.
 YARROW, MRS. WILLIAM
 YOUNG, MRS. A. MURRAY

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 ZABRISKIE, MISS ETHEL
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† The qualifications for this class rest solely upon scientific achievement.

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Founders	8
Associate Founders	13
Patrons	33
Life Members	346
Annual Members	1,065
Honorary Members	5
 <i>(Total)</i>	 1,481

Ladies' Auxiliary	39
Junior Auxiliary	22
Honorary Life	14
Fellows	58
Corresponding Members	19
Sustaining Members	6

Corrected to January 1, 1937.

CHARTER
OF THE
New York Zoological Society

CHAPTER 435, LAWS OF 1895.

AN ACT to incorporate the New York Zoological Society and to provide for the establishment of a zoological garden in the city of New York.

As amended by Chapter 146 of the Laws of 1902; by Chapter 240 of the Laws of 1910; and by Chapter 19 of the Laws of 1930.

See Chapter 432 of the Laws of 1900.

See Charter of the city of New York, Section 626 of the Laws of 1901.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Charles A. Dana, Oswald Ottendorfer, Andrew H. Green, William H. Webb, Henry H. Cook, Samuel D. Babcock, Charles R. Miller, George G. Haven, J. Hampden Robb, Frederick W. DeVoe, J. Seaver Page, Rush C. Hawkins, David James King, Wager Swayne, Charles A. Peabody, Jr., Charles E. Whitehead, Charles R. Flint, Samuel Parsons, Jr., Mornay Williams, Henry E. Gregory, Isaac W. Macclay, Isaac Rosenwald, Hugh N. Camp, Andrew D. Parker, Cornelius Van Cott, William F. Havemeyer, Frederick Shonnard, William W. Thompson, Alexander Hadden, Edward L. Owen, John H. Starin, Rush S. Huidekoper, William W. Goodrich, Albert H. Gallatin, Frederick S. Church, Edward C. Spitzka, Robert L. Niles, Madison Grant, C. Grant La Farge, William Van Valkenburg, and such other persons as may, under the provisions of its by-laws become members of the corporation hereby created, are hereby created a body corporate and politic, by and under the name of New York Zoological Society.

SEC. 2. Said corporation shall have power to establish, maintain and control zoological parks, gardens, or other collections for the promotion of zoology and kindred subjects, and for the instruction and recreation of the people. Said corporation may collect, hold, and expend funds for zoological research and publication, for the protection of wild animal life, and for kindred purposes, and may promote, form, and co-operate with other associations with similar purposes, and may purchase, sell, or exchange animals, plants, and specimens appropriate to the objects for which it was created.

SEC. 3. The trustees of said corporation shall have power to make and adopt by-laws for the management and government of its affairs and business, for the admission, suspension, and expulsion of its members, and for the terms and conditions of membership; to prescribe the number and mode of election of its officers; to define their duties; to provide for the safe-keeping of its property, and from time to time to alter and modify its By-Laws.

SEC. 4. The affairs and business of said corporation shall be managed and controlled by a board of trustees, the number of whom shall be prescribed by the by-laws. The first board of trustees shall be divided by lot into three classes, equal in number, one of which classes shall hold office for one year, another for two years, and the other for three years; and all persons elected to be trustees at any subsequent election shall hold office for three years, and until others are elected in their stead. There shall be a president, two vice-presidents, treasurer and secretary, to be elected by the board of trustees annually, who shall hold office until others are elected in their stead. The first meeting under this act may be held at any time upon a notice of five days, signed by any five of the incorporators named in the first section of this

act, fixing a time and place for such meeting, a copy whereof shall be mailed to each of said incorporators at his usual post-office address, and twelve of such incorporators shall be a quorum for the purpose of organization, adoption of by-laws, and election of officers. No trustee of said corporation shall be interested, directly or indirectly, in any contract concerning its property or affairs.

SEC. 5. Said corporation may raise money by the issue of bonds, secured by a mortgage on any or all of its property not acquired from said city or state.

SEC. 6. Said corporation may take, purchase, and hold real and personal estate necessary for the purpose of its incorporation, and shall possess the general powers and be subject to the restrictions and liabilities prescribed in Article II of Chapter 23 of the Consolidated Laws, entitled "General Corporation Law," being chapter 28 of the Laws of 1909.

SEC. 7. The commissioners of the sinking fund of the said city are authorized in their discretion to allot, set apart, and appropriate for the use of said corporation, any of the lands belonging to said city north of One Hundred and Fifty-fifth Street, but not in the Central Park, and such appropriation may be revoked if, after the expiration of five years from the passage of the act, a zoological garden is not established thereon; said grounds thus set apart and appropriated shall be used for no purpose whatsoever except those aforesaid. As soon as any lands are set apart the Mayor of the said city of New York and the President of the Department of Parks of said city, shall become and be *ex-officio* members of the board of trustees of said corporation. If at any time the animals now composing the menagerie of Central Park shall be removed therefrom by the authorities having charge thereof, said authorities may make an arrangement with the incorporators named in this act or the corporation formed by them for leasing or sale of such animals to such incorporators or corporation, and said incorporators or corporation shall have a preference over any other person or corporation in respect thereto upon the same terms which said authorities could make with any such other person or corporation, or upon such other terms as to such authorities may seem proper, but nothing herein provided shall be construed as giving the commissioners of the Department of Public Parks authority to sell, lease, transfer, or in any other wise dispose of said animals or other property connected with or belonging to said menagerie.

SEC. 8. Admission to the said gardens shall be free to the public for at least four days, one of which shall be Sunday, in each week, subject to such rules and regulations as shall be prescribed by said corporation.

SEC. 9. This act shall take effect immediately.

AN ACT to amend chapter four hundred and thirty-five of the laws of eighteen hundred and ninety-five, entitled "An act to incorporate the New York Zoological Society and to provide for the establishment of a zoological garden in the City of New York" in relation to real and other property.

Became a law May 26, 1917, with the approval of the Governor. Passed, three-fifths being present.

ACCEPTED BY THE CITY.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Chapter four hundred and thirty-five of the laws of eighteen hundred and ninety-five, entitled "An act to incorporate the New York Zoological Society and to provide for the establishment of a zoological garden in the City of New York," as amended by chapter two hundred and forty of the laws of nineteen hundred and ten, is hereby further amended by adding thereto a new section to read as follows:

7-a. The board of estimate and apportionment in the City of New York may, in its discretion, set apart and appropriate upon such conditions as it may deem expedient for the extension and development of the work and objects of the said New York Zoological Society, the whole or any part of that portion of Bronx Park in the City of New York, lying to the south of Pelham avenue and Pelham parkway, for the use of the said New York Zoological Society, the said lands so to be appropriated to be described particularly in the order of the board of estimate and apportionment hereby authorized. The said board of estimate and apportionment may also, in its discretion at the time of setting apart and appropriating said lands or any part thereof to the New York Zoological Society, and annually thereafter, in addition to any sum or sums which it may have appropriated for the support and maintenance of the New York Zoological Park, appropriate to the use of said society, such sum or sums in its discretion for the care and maintenance of the additional lands that may be allotted to the said society under the authority hereby conferred, as it may deem best.

2. This act shall take effect immediately.

New York Zoological Society

AND THE

New York Aquarium

CHAPTER 441, LAWS OF 1902.

AN ACT to authorize a further appropriation to the New York Zoological Society for the support of the New York Aquarium.

As amended by Chapter 239 of the Laws of 1910.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Chapter four-hundred and forty-one of the laws of nineteen hundred and two, entitled "An Act to authorize a further appropriation to the New York Zoological Society for the support of the New York Aquarium," is hereby amended to read as follows:

SECTION 1. The Board of Estimate and Apportionment of the City of New York may annually, in its discretion include in the budget for the then next ensuing financial year, in addition to any sum or sums which may be appropriated for the adequate support and maintenance of the New York Zoological Park or gardens, situated in the borough of the Bronx, and administered and controlled by the New York Zoological Society, a further sum or sums, in its discretion for the use of the said New York Zoological Society, provided, however, that the additional appropriation hereby authorized shall be made only in case an agreement is entered into between the said New York Zoological Society and the City of New York, acting by its Board of Estimate and Apportionment for the adequate keeping, maintenance, extension, preservation and exhibition of the building and approaches thereto and collection of aquatic animals and plants contained therein, known as the New York Aquarium, situated in the Battery Park in the Borough of Manhattan in said city, and also for furnishing opportunities for study, research and publication in connection with said collections, which contract the said Board of Estimate and Apportionment is hereby expressly authorized, in its discretion, to make upon such terms and conditions as may be agreed upon with the said New York Zoological Society, and which contract shall also provide how the duty of the commissioner of parks for the borough of Manhattan and Richmond in respect to maintaining the said aquarium now imposed upon him by law shall be performed.

Sec. 2. This act shall take effect immediately.

GRANT OF SOUTH BRONX PARK
TO THE
New York Zoological Society

At a special meeting of the Commissioners of the Sinking Fund, City of New York, held on March 24, 1897, a resolution was passed allotting South Bronx Park for the use of the New York Zoological Society upon conditions entirely satisfactory to the Society.

The full text of the resolution is as follows:

WHEREAS, by chapter 435 of the Laws of 1895, entitled "An act to incorporate the New York Zoological Society and to provide for the establishment of a Zoological Garden in the City of New York," it is provided that the Commissioners of the Sinking Fund of the City of New York are authorized in their discretion to allot, set apart and appropriate, for the use of said corporation, any of the lands belonging to said city north of 155th Street, but not in Central Park,

RESOLVED, that the said Commissioners of the Sinking Fund do hereby allot, set apart and appropriate for the use of said corporation, a tract of land in the southern portion of Bronx Park, embracing an area of about 261 acres, and consisting of so much of said park as lies south of Pelham Avenue, upon the following terms and conditions, to wit:

First. That said grounds thus set apart and appropriated, shall be used for no other purpose whatsoever except for the sole purposes of said Zoological Garden as the same are specified in the act aforesaid, and that said appropriation of said lands hereby made shall be revoked if, after the expiration of three years from the date of the commencement of the work by the Park Department for the necessary improvement of the grounds as referred to and described in the sixth paragraph of this Resolution, a Zoological Garden is not established upon said tract of land.

Second. That the original equipment of buildings and animals for said Zoological Garden shall be paid for from funds contributed by the New York Zoological Society, and that said Society shall, before it enters into occupation of the allotted land and within one year from the date of this Resolution, raise one hundred thousand dollars by subscription, and within three years from the date of the commencement of the work by the Park Department for the necessary improvement of the grounds as referred to and described in the sixth paragraph of this Resolution, the further sum of at least one hundred and fifty thousand dollars. If the said Society shall fail or neglect to raise said funds within the periods respectively fixed therefor, it shall, on demand of the Commissioners of the Sinking Fund, surrender to the City of New York the land allotted to it as a site for said Garden, and all improvements made thereon. The said Society shall not mortgage its buildings or animals, or any of its property within said Garden, which is directly or indirectly maintained by the City of New York.

Third. The said Zoological Society shall have the power to establish an endowment fund from the donations and bequests, which fund shall be used solely, unless otherwise specified by the donors thereof, for the general uses and purposes of said Society. The funds of said Society, other than the sums contributed to said endowment fund, shall be expended upon buildings and

other enclosures for animals, for the collections of animals, and for the general purposes of the Society. Among the funds thus to be expended shall be the subscriptions of members, life members and patrons, and all cash donations to said Society, other than those made for the purposes of the endowment fund, and all moneys derived from the sale of animals; and the net proceeds of the privileges that may be developed in said Garden, such as refreshments, boating, riding animals, the sale of photographs, etc., shall be used for, and expended in the increase of the collections; and payments from the funds of such Society, including the endowment fund, shall be made directly from the treasury of the Society.

Fourth. The library, pictures, maps, office furniture, and other movable property purchased and owned by the Society shall remain the property of the Society, and excepting living animals, may be removable at will, and every piece of such property shall bear a distinguishing mark. But no buildings, aviaries or cages may be sold or removed by said Society without the written consent of the Board of Parks. All property paid for from the maintenance fund, hereinafter referred to, shall belong to the City.

Fifth. So long as the said Society is entrusted with the control and management of the said Zoological Garden, and the city provides for the proper maintenance and care of the animals and collections therein, the said Society shall not remove any of its animals or collections for exhibition elsewhere without the consent of the Board of Parks, but if the City shall ever cease to provide for the proper maintenance and care of the said animals and collections, the said Zoological Society shall have the right, upon giving three months' notice in writing to the Board of Parks, to remove the said animals and collections owned by it. The said Society shall have the right to improve its collections by the exchange of animals, and also by the sale of animals not needed for exhibition; but all moneys derived from such sale or exchange of animals shall be used only for the purpose of increasing said collections.

Sixth. The City of New York shall annually provide the necessary funds for the maintenance and care of the Zoological Garden, its buildings, inclosures and other improvements made from time to time therein, and the animals and collections of said Society; but the appropriation for the first year is not to exceed Sixty thousand dollars (\$60,000). It shall be the duty of the City to provide from such sums or appropriations, as may be applicable thereto, the cost of the necessary improvement of the ground prior to the erection of buildings and inclosures, including such roads, walks, fences, grading, water supply, drainage and heating as may be or become necessary for the proper development of said Zoological Garden, all of which work of preparation and construction shall be performed in conformity with the plans therefor to be agreed upon between the Park Department and the Zoological Society. The said City shall also furnish the necessary supply of water, and adequate police patrol and protection, and the salaries of all persons employed directly in the service and development of the Zoological Garden shall be paid from the maintenance fund, and from such other funds as may be available for and applicable to the purpose. Payments from the maintenance fund shall be made upon vouchers filed with the Comptroller and drawn in such form as he may direct; and said Society shall annually render the year then past, made on account of the said Zoological Garden, all revenues and resources thereof, a statement of the number of the members of said Society, of the donations received and of the number of animals in the Garden, the chief items of improvement made during the year, and all other information that the said Mayor may require.

Seventh. The Park Department shall at all times have access to the grounds, buildings and other inclosures of the said Zoological Society for general police visitation and supervision, and for all other lawful purposes.

Prior to the commencement of any work on said Garden the general plan therefor shall be submitted to and approved by the Park Board, and all subsequent plans for buildings, roadways and paths shall also be so submitted and approved. No living tree shall be cut down or removed, except by the express authority of said Park Department, but the said Zoological Society shall have the right to remove dead trees and such bushes as it may be necessary to remove in the preparation of inclosures for animals, or in making other improvements. The said Department of Parks shall plant such and so many shade trees, aquatic plants, shrubs and flowers as may be necessary to enhance and secure the seclusion, beauty and usefulness of the park, and shall do and perform all the work of gardening necessary to carry out the general plan of improvement and the subsequent plans as may be agreed upon between the said Zoological Society and the said Department of Parks.

Eighth. The said Zoological Garden and its collection shall be free to the public without the payment of any admission fee or gratuity whatsoever for not less than seven hours a day on at least five days of the week, one of which shall be Sunday, and also on all legal holidays and half holidays, subject to such reasonable regulations as may be made by said Society, but the said Society may close the area devoted to the collections of animals on not more than two days in each week, and on such days may charge an admission fee which shall be fixed by said Society, and all moneys derived from such admission fees shall be expended by said Society in the increase of the collections or in the improvement of said Garden or its buildings; but the portion of the grounds situated east of Boston Road, and all the Bronx River below the Boston Road bridge shall be open to the public at all times as pleasure grounds, subject to such reasonable regulations as may be adopted by said Society with the approval of the Park Department, and the occupancy of that portion of the park by herds of animals or by collections, shall be subject to the consent of the Park Department.

Ninth. The said Zoological Society shall have the right and power to appoint, direct, control and remove all persons and officers employed by them in and about the Zoological Gardens, and to fix the salaries of such persons and officers and to make promotions, but all regular employees shall be chosen, and their salaries fixed and promotions made, by reason of special fitness and ability.

Tenth. Subject to the conditions hereinbefore contained, the said Zoological Society shall exercise entire control and management over all the affairs of the said Zoological Garden.

BY-LAWS
OF THE
New York Zoological Society

AS AMENDED MAY 21, 1925, DECEMBER 27,
1929, MAY 22, 1930, AND DECEMBER 26, 1931.

ARTICLE I.

MEETINGS OF THE SOCIETY

SECTION 1. The office and place of business of the New York Zoological Society shall be in the City of New York, unless otherwise ordered.

SEC. 2. The Society shall hold its annual meeting for the election of Trustees, and other business, on the second Tuesday of January, or such day thereafter during the month of January to which said annual meeting shall adjourn.

SEC. 3. Special meetings of the Society shall be called by the Secretary, upon the request of the President or the Chairman of the Executive Committee, or at the written request of ten members.

SEC. 4. Notices of all meetings shall be mailed to each member of the Society at least three days before such meeting.

SEC. 5. At meetings of the Society twenty members shall constitute a quorum.

SEC. 6. The order of business shall be as follows:

1. Roll Call.
2. Reading of minutes not previously read.
3. Report of Executive Committee.
4. Report of Secretary.
5. Report of Treasurer.
6. Report of the Director of the Zoological Park.
7. Report of Director of the Aquarium.
8. Election of Trustees.
9. Communications.
10. Miscellaneous business.
11. Reports and resolutions.

ARTICLE II.

BOARD OF TRUSTEES

SEC. 1. The Board of Trustees shall consist of thirty-six members, together with the Mayor of New York and President of the Park Board, or Commissioner for the Bronx, who shall be members *ex-officio* of the Board.

SEC. 2. Twelve Trustees shall constitute a quorum; but seven Trustees may transact current business, and adjourn, subject to the subsequent approval of a meeting at which a quorum shall be present.

SEC. 3. The Board of Trustees shall hold an annual meeting on the twenty-eighth day of December in each year, unless said date shall fall upon a Saturday or Sunday, in which event the annual meeting shall be held on the following week day. The hour and place shall be fixed by the Chairman of the Board. If a quorum is lacking those present may adjourn the meeting and fix the

time and place thereof. Regular meetings of the Board may also be called by the Secretary on the third Tuesdays of October and April upon the request of the President or Chairman of the Executive Committee. Special meetings of the Board shall be called at any time by the Secretary upon the request of the President or Chairman of the Executive Committee, or at the written request of five Trustees.

SEC. 4. Notices of meetings of the board shall be mailed to each Trustee at least three days before such meetings.

SEC. 5. The successors to the outgoing class of Trustees shall be elected by the Society at its annual meeting, but vacancies in the Board may be filled for the unexpired term by the Board of Trustees, or by the Executive Committee.

SEC. 6. A Nominating Committee shall be annually appointed by the Executive Committee, and shall consist of three members of the Society at large, who shall nominate and post ten days before the annual election the names of twelve persons to succeed the outgoing class of Trustees in a conspicuous place in the office of the Society.

SEC. 7. No person shall be eligible for election to the Board of Trustees except to fill vacancies, unless his name shall have been posted as a candidate by such committee, or by not less than ten members, in writing, in a conspicuous place in the office of the Society ten days before the annual election. All candidates for election as Trustees must be Life Members, Patrons, Associate Founders, or Founders of the Society.

SEC. 8. Any Trustee who shall fail to attend three consecutive meetings of the Board, unless excused by a vote of the Board, shall cease to be a Trustee.

SEC. 9. The Board of Trustees shall at its annual meeting elect a President, two Vice-Presidents, a Secretary, and Treasurer, who shall hold office for one year, or until their successors are elected. The President, Vice-Presidents, and Treasurer shall be members of the Board.

SEC. 10. The Director of the Zoological Park, the Director of the Aquarium, and all other persons employed by the Society, shall be appointed by the Board or by the Executive Committee, and shall hold office during the pleasure of the Board.

SEC. 11. The Board shall, at its annual meeting, elect an Executive Committee, Finance Committee and Auditing Committee, which shall hold office for one year, or until their successors are elected. The Board of Trustees and the Executive Committee shall also have authority to appoint such other Committees or officers as they may at any time deem advisable and to delegate to them such powers as may be necessary.

SEC. 12. The order of business of the meetings of the Board shall be as follows:

1. Roll Call.
2. Reading of minutes not previously read.
3. Report of Executive Committee.
4. Report of Secretary.
5. Report of Treasurer.
6. Report of Auditing Committee.
7. Report of Director of Zoological Park.
8. Report of the Director of the Aquarium.
9. Election of Officers
10. Election of Committees.
11. Election of new members.
12. Communications.
13. Miscellaneous business.

SEC. 13. All reports and resolutions shall be in writing, and the ayes and nays may be called on any resolution at the request of one Trustee.

SEC. 14. Whenever the funds of the Society shall permit, the Board of Trustees or the Executive Committee may award medals or other prizes for meritorious work connected with the objects of the Society.

ARTICLE III.

OFFICERS

SEC. 1. The officers of the Society shall consist of a President, two Vice-Presidents, a Treasurer, a Secretary, and a Director of the Zoological Park. These officers, with the exception of the Director, shall be elected at the annual meeting of the Board of Trustees, but any vacancy may be filled for an unexpired term by the Board of Trustees, or by the Executive Committee, until the next annual election.

SEC. 2. The President shall preside at all meetings of the Board and of the Society, and shall be *ex-officio* a member of the Executive and Auditing Committees.

SEC. 3. The Vice-Presidents shall, in the absence of the President, perform his duties and possess his powers, acting in the order of their election.

SEC. 4. The Treasurer shall receive, collect and hold, subject to the order of the Board of Trustees, or the Executive Committee, all dues, subscriptions, warrants from the City, fees and securities. He shall pay all bills as ordered by the Board of Trustees or the Executive Committee, and shall report to the Society at its annual meeting, and to the Board of Trustees at all regular meetings, and to the Executive Committee at each meeting. He shall keep all moneys and securities in some bank or trust company to be approved by the Board of Trustees or Executive Committee. The books of the Society shall at all times be open to the inspection of the Trustees.

SEC. 5. The Secretary, unless relieved by the Board or Executive Committee, shall attend all meetings of the Society, of the Board and of the Standing Committees. He shall keep a careful record of all proceedings, shall have the custody of the seal, archives and books, other than books of account, and shall conduct the correspondence of the Society. He shall issue all notices and tickets, and shall perform such other duties as the Board may direct. He shall be a member *ex-officio* of the Executive, Aquarium, and Auditing Committees, and of the Scientific Council.

SEC. 6. The Director of the Zoological Park shall be elected annually by the Executive Committee at a salary to be determined by said Committee, and shall hold office until removed or his successor chosen by said Committee. He shall be the responsible administrative officer of the Park, and shall recommend to the Executive Committee candidates for the various positions in the Park. He shall also perform all such other duties in connection with the business, scientific, and literary administration of the Society as may be assigned to him by the Executive Committee.

SEC. 7. The Director of the Aquarium shall be elected annually by the Executive Committee, and shall hold office until removed or his successor is chosen by said Committee. He shall be the responsible administrative officer of the Aquarium, and shall recommend to the Executive Committee all candidates for positions in the Aquarium. The director of the Aquarium shall be *ex-officio* a member and Chairman of the Aquarium Committee. He shall perform such other duties in connection with the Aquarium as may be assigned to him by the Executive Committee.

ARTICLE IV.

COMMITTEES

SEC. 1. There shall be three standing committees, the Executive Committee, the Finance Committee and the Auditing Committee, which shall hold office for one year or until their successors are elected.

SEC. 2. The Executive Committee shall consist of eight Trustees, together with the President, Secretary and Treasurer of the Society *ex-officio*. Four members including the Chairman shall constitute a quorum, and all meetings shall be called by the Chairman. The Executive Committee shall fill all vacancies in its own number and shall have the full power of the Board of Trustees, except so far as such delegation of power may be contrary to law.

SEC. 3. The Executive Committee shall have the control and regulation of the collections, library and all other property of the Society, and shall have the power to purchase, sell and exchange specimens and books.

The Executive Committee shall also have power to employ and control all officials and employees of the Society, Park and Aquarium, to authorize the payment of a salary to the Chairman of the Executive Committee, the Secretary and other officials in its discretion, to fix the amount of all salaries, and generally to carry out in detail the directions of the Board of Trustees and the terms of any contract between the City, or Park Board, and the Society.

SEC. 4. All the rules and regulations for the examination of applicants for the various positions in the Park and Aquarium shall be made or approved by the Executive Committee.

SEC. 5. The Executive Committee may regulate the auditing and payment for all current accounts.

SEC. 6. The Executive Committee shall annually appoint an Aquarium Committee, whose duties and powers are set forth in Section 11 of Article IV of these By-Laws.

SEC. 7. The Executive Committee shall annually appoint a Nominating Committee, whose duties and powers are set forth in Sections 6 and 7, Article II, of these By-Laws.

SEC. 8. It shall also appoint a Scientific Council, whose powers and duties are set forth in Section 2 of Article V of these By-Laws.

SEC. 9. The Executive Committee shall make a written report at each regular meeting of the Board of Trustees.

SEC. 10. The Auditing Committee shall consist of three regular members of the Society, in addition to the President and Secretary, members *ex-officio*, and vacancies shall be filled by the Executive Committee. It shall be the duty of the Auditing Committee to audit, annually, the accounts of the Treasurer, of the Director of the Zoological Park, and of the Director of the Aquarium, and any other accounts of the Society, and to report to the Board of Trustees at its annual meeting.

SEC. 11. The Executive Committee shall annually appoint an Aquarium Committee, not to exceed eight members of the Society, who shall hold office until their successors are chosen. All vacancies shall be filled by the Executive Committee. The Director of the Aquarium shall be *ex-officio* a member and the Chairman of the Aquarium Committee, and such Committee may vest in him any or all of its powers. The Chairman of the Executive Committee and the Secretary of the Society shall also be *ex-officio* members of the Aquarium Committee. Three members shall constitute a quorum. The Executive Committee may delegate to the Aquarium Committee such powers as it may deem proper.

SEC. 12. The Finance Committee shall consist of three or more Trustees with the Treasurer of the Society *ex-officio* who shall act as Chairman. The Finance Committee shall have authority in its discretion to sell bonds, stocks, and other securities belonging to the Society and to invest and reinvest the proceeds, together with any other funds of the Society available for investment, in such securities as it may deem wise and shall advise the Board of Trustees as to changes that it deems advisable in securities already owned by the Society. Notwithstanding the power hereby conferred the Executive Committee may at any time direct the sale of any securities held by the Society or direct the Treasurer to invest available funds of the Society in such securities as it may select. The Finance Committee shall report from time to time to the Executive Committee all securities purchased or sold. The report of the Treasurer as to the investment of the funds of the Society shall be sufficient authority to the Chairman of the Executive Committee for approving drafts upon the bank account of the Society to pay for the same.

All bonds, stocks, and other securities shall be deposited for safe-keeping in a Trust Company approved by the Executive Committee to be held for the account of the Society and subject to the joint written order of the President and the Treasurer or of any other two officers authorized by the Executive Committee. All transfers and assignments of the securities registered or standing in the name of the Society shall be executed under its seal by the President or Vice-President together with the Secretary or Treasurer of the Society.

ARTICLE V.

SCIENTIFIC COUNCIL

SEC. 1. The Executive Committee shall annually appoint a Scientific Council of not more than ten members, and shall fill all vacancies. Members of the Council shall hold office until their successors are appointed.

SEC. 2. The duties of the Council shall be to act as an advisory board in all matters pertaining to the scientific administration of the Society, and especially as to the scientific features of the Park, the promotion of zoology by publications and otherwise, and the preservation of the native fauna of America.

SEC. 3. Four members, including the Chairman, shall constitute a quorum. The Chairman shall be elected annually by the Council. The Chairman of the Executive Committee and the Secretary of the Society shall be members *ex-officio* of the Council.

ARTICLE VI.

MEMBERS

SEC. 1. The present members and such others as shall become associated with them, under the conditions prescribed by the By-Laws, shall be members of this Society as long as they shall comply with the By-Laws.

SEC. 2. Members failing to comply with these By-Laws, or for other good and sufficient cause, may be expelled from the Society by the Executive Committee.

SEC. 3. Candidates for membership shall be proposed and seconded by members of the Society. The name, occupation, and place of residence of every member as proposed shall be submitted for election to the Board of Trustees or the Executive Committee, and such person, when elected, shall become a member upon payment of the annual dues, or of the fees as prescribed below.

SEC. 4. There shall be a class known as Fellows, which shall consist of members of the Society who have rendered marked services to science, and shall be chosen by the Executive Committee. The privileges of Fellows shall

be in all respects the same as those of regular members of the Society, but they shall be exempt from the payment of annual dues.

SEC. 5. The annual dues shall be ten dollars, payable in advance, on the first day of May of each year, but the Executive Committee may remit the dues for the current year in the case of members elected between January 1st and May 1st of each year. The classes of membership shall be as follows:

SEC. 6. The payment of \$200 at one time shall constitute any member a Life Member.

A member who has paid annual dues for a period of five years may thereafter, at any time, upon the payment of the difference between the amount of dues already paid and \$200, become a Life Member, but such payment shall be not less than \$100.

SEC. 7. The payment of \$1,000 at one time, or in the case of a Life Member, of \$800, shall constitute any member a Patron.

SEC. 8. The payment of \$2,500 at one time, or in the case of a Patron of \$1,500, or of a Life Member of \$2,300, shall constitute any member an Associate Founder.

SEC. 9. Any member who shall donate to the Society \$5,000, or property of equal value, or any Associate Founder who shall donate \$2,500, or any Patron who shall donate \$4,000, may be elected by the Board of Trustees or Executive Committee a Founder.

SEC. 10. Any member who shall have donated to the Society ten thousand dollars (\$10,000), or its equivalent, may be elected by the Board of Trustees or the Executive Committee a Founder in Perpetuity. Such Founder in Perpetuity shall have the power to designate by a last will and testament his successor, who shall thereupon be entitled to all the rights and privileges of the original Founder in Perpetuity, including the right of designating in turn his successor.

SEC. 11. Any member who shall have donated to the Society \$25,000, or its equivalent, may be elected by the Board of Trustees, or the Executive Committee, a Benefactor. Benefactors shall have the rights and privileges of a Founder in Perpetuity.

SEC. 12. Persons who have rendered marked service in the science of zoology or natural history may be elected Honorary Members, but not more than three such Honorary Members shall be elected in any one calendar year.

SEC. 13. A resident member who shall have rendered marked scientific or professional services to the Society in any branch of its work may be elected by the Executive Committee a Life Member, Patron, Associate Founder, or Founder. A resident of New York who shall have rendered marked service in zoology or natural history may be elected by the Executive Committee a Permanent Fellow.

SEC. 14. Non-residents who communicate valuable information to the Society, or who have rendered marked service in the science of zoology or natural history, may be elected Corresponding Members.

SEC. 15. Benefactors, Founders in Perpetuity, Founders, Associate Founders, Patrons, Life Members, Honorary Members, Permanent Fellows, Fellows, and Corresponding Members shall be exempt from annual dues.

ARTICLE VII.

PRIVILEGES OF MEMBERS

SEC. 1. A member's ticket admits the member and his immediate family to the Park on reserve days, and to all lectures and special exhibitions, and may be used by the member's immediate family, and shall be good for the current year.

SEC. 2. Admission tickets to the Park and Aquarium on reserve days are issued to members for distribution, and are good for the current year.

SEC. 3. Each member of the Society is entitled annually to a member's ticket and to ten admission tickets.

SEC. 4. Each member shall also receive one copy of the catalogue or handbook, the report and official publication of the Society, and shall have all the privileges of the Library and Members' Building.

SEC. 5. No member shall be entitled to the privileges enumerated in this Article unless his annual dues shall have been paid.

SEC. 6. The Life Members shall have all the privileges of members and ten additional admission tickets.

SEC. 7. Benefactors, Founders in Perpetuity, Founders, Associate Founders and Patrons shall have all the privileges of Life Members, and shall in addition receive copies of all scientific works published by the Society.

SEC. 8. Any member who shall fail to pay his annual dues within three months after the same shall have become due, and after notice of thirty days, by mail, shall cease to be a member of the Society; subject, however, to reinstatement by the Board of Trustees or Executive Committee for good cause shown.

SEC. 9. Any person elected to membership who shall fail to qualify within three months after notice of his election shall be considered to have declined his election; but such term may be extended by the Board of Trustees, or Executive Committee.

ARTICLE VIII.

FINANCES

SEC. 1. The fiscal year of the corporation shall be the calendar year commencing January 1st and ending December 31st.

SEC. 2. Neither the Society nor any of its Trustees or Officers shall contract any debt which, with existing debts, shall exceed in amount the funds then in the Treasury, except to meet expenditures for which the City is liable, and for which the Society will be reimbursed by warrants from the Comptroller's office.

ARTICLE IX.

AMENDMENTS

SEC. 1. Amendments to these By-Laws may be proposed, in writing, at any meeting of the Board of Trustees, and adopted by unanimous consent of the Trustees present, or if such proposed amendment shall fail to receive unanimous consent, the Secretary shall, with the notices of the next meeting, send a copy of it to each Trustee and state that it will be brought up for action at such meeting, when it may be passed by a majority vote.

